

CHAPTER 6

Alternatives

CEQA Guidelines Section 15126.6 requires that an EIR include an analysis of “a range of reasonable alternatives to the project, or to the location of the project” and indicates that alternatives should be crafted to accomplish most of the basic objectives of the project while avoiding or substantially lessening significant impacts of the project. Importantly, Section 15126.6(a) states that “an EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.” Therefore, alternatives must be “potentially feasible” as the term is broadly defined under CEQA. Whether an alternative is “actually feasible” is a different question for the decision makers at the time of approval.

Consistent with these requirements, this chapter reiterates the project objectives outlined in Chapter 3, *Project Description*, then summarizes significant impacts of the project identified in Chapter 4 and Chapter 5, and presents other factors considered in the selection of alternatives. The chapter then goes on to describe the following alternatives:

- Alternative 1: The No Project Alternative
- Alternative 2: The Off-Site (Coliseum Area) Alternative
- Alternative 3: The Proposed Project with Railroad Grade Separations Alternative; and
- Alternative 4: The Reduced Project Alternative

The impacts of each alternative are described and compared to impacts of the proposed project presented in Chapter 4 and Chapter 5, and then a comparison of the alternatives describes the relative impacts/merits of each.

Following the comparative analysis, this chapter describes a number of alternatives that were considered but were not selected for in depth analysis, explaining the reasons for this decision, and identifies the environmentally superior alternative.

6.1 Factors Considered in Selection of Alternatives

In selecting alternatives for analysis in this chapter, the City of Oakland considered (a) the Project objectives articulated in Chapter 3, *Project Description*, (b) the significant impacts identified in Chapter 4 and Chapter 5, and (c) the potential feasibility of alternatives based on factors in CEQA Guidelines Section 15126.6(f)(1).

CEQA Guidelines, Section 15364, defines “feasibility” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” CEQA Guidelines Section 15126.6(f)(1) states that the factors that may be taken into account when addressing the feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).

Factors contributing to feasibility include economic, environmental, legal, social, policy, and technological factors. Because one of the main overarching purpose of the proposed Project is to construct a new major league ballpark, no alternatives were selected for analysis that would not achieve this purpose, except for the No Project Alternative, which is required to be analyzed under CEQA (see CEQA Guidelines Section 15126.6(e)).

6.1.1 Project Objectives

Section 15124(b) of the CEQA Guidelines requires an EIR to include a statement of objectives sought by the project. The objectives assist the City, as lead agency, in developing a reasonable range of alternatives to be evaluated in the EIR. The project objectives also aide decision makers in preparing findings or, if necessary, a statement of overriding considerations. The statement of objectives also includes the underlying purpose of the project and the project benefits. The objectives for this project are as follows:

1. Construct a state-of-the-art, multi-purpose waterfront ballpark and event center in Oakland that meets MLB requirements for sports facilities, can be used year-round for sporting events and entertainment and convention purposes with events ranging in capacity up to 35,000, and expands opportunities for the City’s tourist, hotel and convention business.
2. Provide sufficiently dense, complementary mixed-use development with a range of flexible uses, including residential, office, retail, and entertainment, to create a vibrant local and regional visitor-serving waterfront destination that is active year round, complements the waterfront ballpark, expands tourism and visitor activity and interest even when the ballpark is not in use, increases housing at a range of affordability levels, and provides increased business and employment opportunities.
3. Construct a new ballpark for the Oakland Athletics on Oakland’s waterfront, designed and sited to respond to local conditions, including wind and sun and thermal conditions, while maximizing water views, with the goal of optimizing player and fan experiences of the ballpark, the waterfront and the project site.
4. Create a lively, continuous waterfront district with strong connections to Jack London Square, West Oakland, and Downtown Oakland by extending and improving existing streets, sidewalks, bicycle facilities and multi-use trails through and near the project site to maximize pedestrian and nonmotorized mobility and minimize physical barriers and division with nearby neighborhoods.

5. Complete construction of the new ballpark, together with any infrastructure required to serve the ballpark, within a desirable timeframe and to maintain the Oakland Athletics' competitive position within Major League Baseball.
6. Construct high-quality housing with enough density to contribute to year-round active uses on the project site while offering a mix of unit types, sizes, and affordability to accommodate a range of potential residents and to assist Oakland in meeting its housing demand.
7. Develop a financially feasible project that is responsive to market demands; has the ability to attract sources of public and private investment in an amount sufficient to fund all costs of the proposed project, including the construction and long term maintenance of required infrastructure; provide a market rate return on investment; and supports a comprehensive package of benefits, which may include local employment and job training programs, local business and small business policies, public access and open space, affordable housing, transportation infrastructure, increased frequency of public transit and transit accessibility, and sustainable and healthy development measures for the surrounding community.
8. Design a project that minimizes interference with the Port of Oakland's existing or reasonably anticipated use, operation and development of Port facilities, or the health and safety of Port tenants and workers, and is consistent with the continued operation and future growth of the Port of Oakland.
9. Increase public use and enjoyment of the waterfront by opening the south and southwestern shores of the project site to the public with a major new waterfront park and inviting waterfront promenade featuring multiple public open spaces that are usable and welcoming in all seasons, extending access to the Oakland waterfront from Jack London Square, West Oakland and Downtown Oakland through design of a bicycle, pedestrian, and transit-oriented community with well-designed parks, pedestrian-friendly streets, walkable blocks, and links to open spaces, taking advantage of the project site's unique proximity to Jack London Square, the waterfront and downtown.
10. Construct a project that meets high-quality urban design and high-level sustainability standards, including but not limited green building design and construction practices, walkability features, and sea level rise adaptability standards.
11. Optimize opportunities for sustainable transportation by encouraging walking, bicycling, and transit use, and discouraging automobile use.

6.1.2 Impacts of the Project

As presented in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, supplemented in Chapter 5, *Variants*, and summarized in Chapter 2, *Summary*, and Chapter 7, *Impact Overview and Growth Inducement*, the proposed Project would result in a variety of significant impacts, most of which could be reduced to less than significant with adoption of identified mitigation measures. The following impacts of the Project would remain significant despite the implementation of identified feasible mitigation measures and would also occur under the Maritime Reservation Scenario:

Impact AES-5: Wind Hazards -- The Project would create winds that exceed 36 mph for more than one hour during daylight hours during the year. This significant and unavoidable impact would occur with Phase I and Buildout. The impact would be addressed with

implementation of Mitigation Measure AES-1, which would require a wind impact analysis prior to building permit issuance for buildings 100 feet or greater in height, although the effectiveness of this measure cannot be determined with certainty.

Impact AES-1.CU: Cumulative Wind Hazards -- The Project would also contribute to a significant cumulative exceedance of the wind hazard criterion when combined with cumulative development in the Project vicinity. The Project's contribution would be addressed with implementation of Mitigation Measure AES-1, which would require a wind impact analysis prior to building permit issuance for buildings 100 feet or greater in height, although the effectiveness of this measure cannot be determined with certainty.

Impact AIR-1: Criteria Pollutants Emissions from Construction -- Demolition and construction associated with the project would result in average daily emissions of criteria pollutants that would exceed the City's construction significance thresholds of 54 pounds per day of ROG, NO_x, or PM_{2.5} or 82 pounds per day of PM₁₀. Mitigation Measures AIR-1a, AIR-1b, AIR-1c, and AIR-1d would reduce these emissions, but not to a level less than significant for NO_x emissions.

Impact AIR-2: Criteria Pollutant Emissions from Operation of the Project and Overlapping Construction and Operation -- Operation of the Project (and combined construction and operation) would result in average daily emissions of criteria pollutants that would exceed 54 pounds per day of ROG, NO_x, or PM_{2.5} or 82 pounds per day of PM₁₀, or result in maximum annual emissions that exceed 10 tons per year of ROG, NO_x, or PM_{2.5} or 15 tons per year of PM₁₀. Mitigation Measures AIR-1b, AIR-1c, AIR-1d, AIR-2a, AIR-2b, AIR-2c, AIR-2d, and AIR-2e would reduce these emissions, but not to a level less than significant for these pollutants.

Impact AIR-1.CU: Cumulative Regional Criteria Pollutants -- The Project, combined with cumulative sources in the Project vicinity and citywide, would contribute to cumulative regional air quality impacts associated with criteria pollutants. Project mitigation in addition to Mitigation Measure AIR-1.CU would reduce but not avoid this significant impact.

Impact AIR-2.CU: Cumulative Health Risk Impacts -- The Project, combined with cumulative sources would contribute to cumulative health risk impacts on sensitive receptors. Project mitigation in addition to Mitigation Measure AIR-2.CU would reduce but not avoid this significant impact.

Impact CUL-4: Crane X-422 Removal -- The Project may include removal of Crane X-422. The City has received two studies with differing conclusions on the historic significance of Crane X-422 and out of an abundance of caution, this EIR treats Crane X-422 as an historic resource for CEQA purposes. As such, removal of Crane X-422 from the site would result in the loss of a historical resource, which would be a significant and unavoidable impact. Mitigation Measures CUL-3a, CUL-3b, and CUL-3c would reduce but not avoid this significant impact.

Impact CUL-1.CU: Cumulative Loss of Historic Fabric -- As noted above, the Project may include removal of Crane X-422 and out of an abundance of caution, this EIR treats Crane X-422 as an historic resource. As such, the proposed Project, in combination with development anticipated under the Downtown Oakland Specific Plan and citywide, would contribute to cumulative adverse impacts on historic resources. Project mitigation would reduce but would not avoid this significant impact.

Impact NOI-1: Construction Noise -- Construction of the proposed Project (Phase 1 and Build-out) would result in substantial temporary or periodic increases in ambient noise levels in the area above existing levels or in excess of standards established in the general plan or noise ordinance or applicable standards of other agencies. Mitigation Measures NOI-1a, NOI-1b, NOI-1c, NOI-1d, NOI-1e, and NOI-1f would reduce noise levels, but not to a level less than significant.

Impact NOI-2: Construction Vibration -- Construction of the proposed Project (Phase 1 and Build-out) could expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration. Mitigation Measure NOI-1b would reduce vibration, but not to a level less than significant for human exposure.

Impact NOI-3: Operational Noise Impacts -- Operation of the proposed Project would result in generation of noise resulting in a 5-dBa permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, or generate noise in violation of the City of Oakland Noise Ordinance regarding operational noise. Mitigation Measures NOI-2a, NOI-2b, and NOI-2c would reduce noise levels, but not to a level less than significant for crowd noise outside the ballpark.

Impact NOI-1.CU: Cumulative Impact/Construction Noise -- Construction activities of the proposed Project combined with cumulative construction noise in the project area could cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.

Impact NOI-2.CU: Cumulative Impact/Operational Noise -- Operation of the proposed Project, specifically traffic associated with Project build-out with or without ballgame traffic, when considered with other cumulative development, would cause a substantial permanent increase in ambient noise levels in the project vicinity.

Impact TRANS-3: Consistency with Adopted Policies/Multimodal Traffic at At-Grade Railroad Crossings -- Operation of the Project (Phase 1 and Build-Out) would generate additional multimodal traffic traveling across the at-grade railroad crossings on Embarcadero that would cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent or substantial transportation hazard. Mitigation Measures TRANS-3a and TRANS-3b would reduce the hazard, but not to a level less than significant.

Impact TRANS-6: CMP Roadway Segments -- Operation of the Project would increase congestion on regional roadways included in the Alameda County Congestion Management Plan. Specifically, conditions would degrade from Level of Service (LOS) E or better to LOS F or increase the volume to capacity (v/c) ratio by 0.03 or more for segments already projected to operate at LOS F in 2020. The two segments affected would be:

- Posey Tube in the eastbound direction between the City of Alameda and the City of Oakland, and
- Webster Tube in the westbound direction between the City of Oakland and the City of Alameda.

Impact TRANS-2.CU: Cumulative Impact/Multimodal Traffic at At-Grade Railroad Crossings -- Operation of the Project (Phase 1 and Build-Out) would generate additional multimodal traffic traveling across the at-grade railroad crossings on Embarcadero that would

contribute to a cumulative transportation hazard. Project mitigation measures would reduce the hazard, but not to a level less than significant.

Impact TRANS-4.CU: Cumulative Impact/CMP Roadway Segments -- The Project in combination with other planned development would contribute to increased congestion on regional roadways included in the Alameda County Congestion Management Plan. Specifically, conditions would degrade from Level of Service (LOS) E or better to LOS F or increase the volume to capacity (v/c) ratio by 0.03 for segments already projected to operate at LOS F in 2040. The eight segments affected would be:

- I-880 in the northbound direction between 23rd Avenue and Embarcadero.
- SR 24 in the eastbound direction between Broadway and State Route 13.
- San Pablo Avenue in the northbound direction between MacArthur Boulevard and Powell Street
- San Pablo Avenue in the southbound direction between MacArthur Boulevard and Market Street
- Posey Tube in the eastbound direction between the City of Alameda and the City of Oakland.
- Webster Tube in the westbound direction between the City of Oakland and the City of Alameda.
- Castro Street in the northbound direction between 8th Street and 12th Street
- Market Street in the northbound direction between 12th Street and 14th Street

In addition to the significant and unavoidable impacts identified above, the Project variants would result in the following additional significant and unavoidable impacts:

Impact CUL-8: Peaker Power Plant Partial Demolition (Peaker Power Plant Variant) -- The proposed Project, with the Peaker Power Plant Variant, would directly impact a historical resource through removal of portions of the east and west wings of the building at 601 Embarcadero West. Mitigation Measure CUL-6a and CUL-6b would reduce the severity of this impact, which would nonetheless remain significant and unavoidable.

Impact CUL-10: Gondola – Old Oakland (Aerial Gondola Variant) -- The proposed Project, with the Aerial Gondola Variant, could result in indirect impacts to the Old Oakland API, an historic resource, by introducing new gondola-related features above and at the northern boundary of the API. Mitigation Measure CUL-7 would reduce the severity of this impact, which would nonetheless remain significant and unavoidable.

Impact CUL-3.CU: Cumulative Impact/Peaker Power Plant Modifications (Peaker Power Plant Variant) -- The Project, in combination with the Peaker Power Plant Variant and development anticipated under the Downtown Oakland Specific Plan, would contribute to a citywide cumulative impact on cultural and historic resources identified in the DOSP EIR through the loss of the historic wings of the Peaker Power Plant.

Impact CUL-4.CU: Cumulative Impact/Aerial Gondola (Aerial Gondola Variant) -- The proposed Project, in combination with the Aerial Gondola Variant and development anticipated under the Downtown Oakland Specific Plan, would contribute to a citywide

cumulative impact on cultural and historic resources identified in the DOSP EIR through changes to the setting of the Old Oakland API.

6.2 Alternatives Selected for Consideration

Four alternatives are described below, including: Alternative 1, the No Project Alternative; Alternative 2, the Off-Site (Coliseum Area) Alternative; Alternative 3, the Proposed Project with Railroad Grade Separations Alternative; and Alternative 4, the Reduced Project Alternative. Following each description, the impacts of each alternative are summarized and compared to impacts of the Project. For purposes of this comparison, Project impacts are those identified in Chapter 4 and include Project variants only in instances (i.e. for resource topics) where impacts would be more severe with one or more of the variants analyzed in Chapter 5. A comparison of all four alternatives is presented in Section 6.3, *Comparative Analysis*.

6.2.1 Alternative 1: The No Project Alternative

CEQA requires EIRs to analyze a No Project Alternative, which allows decision makers to compare impacts of approving the proposed Project to impacts of not improving the proposed Project (CEQA Guidelines Section 15126.6(e)(1)).

Under the No Project Alternative, the A's would not relocate to Howard Terminal, which would not be redeveloped with a mix of new uses and would remain in use by the Port of Oakland for maritime uses. For the foreseeable future, uses and activities at Howard Terminal would continue to include truck parking, loaded and empty container storage and staging, transloading (i.e. logistics) facilities, longshoreperson training facilities, and occasional berthing of vessels for repair. There would continue to be no public access to the Bay from Howard Terminal and on- and off-site park and open space improvements proposed as part of the project would not be constructed. No changes would be made to the regulatory documents governing site uses and maintenance given hazardous materials in the soil and groundwater; no changes would be made to address stormwater runoff; and there would be no increased demand for potable water, wastewater treatment, or public services. The turning basin could be expanded if desired and permitted in the future, as discussed in the Project's Maritime Reserve Scenario.

Neither of the Project variants would be implemented and the Peaker Power Plant, located in the historic Pacific Gas & Electric (PG&E) Station C facility on the northern portion of the Project site, would continue operation as a 165 Mega-Watt (MW) jet fuel power generation facility in accordance with the Reliability Must Run designation by the California ISO.

Under this alternative, the Oakland A's would continue to use the Oakland Coliseum until the end of their current lease in 2024. In the longer term, it is a likely possibility that the A's would have to build a new ballpark, either in Oakland or somewhere else.

Analysis of the No Project Alternative

The No Project Alternative would perpetuate existing conditions and therefore would not result in environmental impacts as explained further below.

Aesthetics, Shadow, Wind

Alternative 1, the No Project Alternative, would not make any physical changes to the Project site and would thus not change views, shading, light and glare or wind conditions at the project site. As a result, Alternative 1 would avoid significant and unavoidable impacts of the Project associated with wind: **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion.

Air Quality

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. There would be no new air pollutant emission sources, and no changes to current sources of emissions (primarily trucks) on the Project site, which have been calculated and presented in **Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts**.

There would also be no new sensitive receptors (e.g. residents) added to the site under Alternative 1 and Alternative 1 would avoid significant and unavoidable impacts of the project associated with criteria pollutant emissions, including: **Impact AIR-1**, construction-related emissions specific to NO_x; **Impact AIR-2**, operation plus construction-related emissions specific to ROG, NO_x, and PM₁₀; and **Impact AIR-1.CU**, construction-related contributions to cumulative regional air quality impacts specific to NO_x. The No Project Alternative would also avoid the significant and unavoidable cumulative impact related to health risks, **Impact AIR-2.CU**.

Biological Resources

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. There would be no impact to biological resources from construction or operation and less than significant impacts of the proposed Project would be avoided without the need for mitigation.

Cultural and Tribal Resources

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. Without construction activities, the No Project Alternative would avoid the Project's potential significant impact on historic architectural resources (due to possible removal of Crane X-422 and the conservative assumption that the Crane is an historic resource).¹ The No Project Alternative would also avoid the Project's less than significant impact to archaeological resources requiring mitigation.

Energy

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. Energy use associated with construction and operation of the proposed Project would not be needed, and benefits of the Peaker Power Plant Variant would not be realized.

Geology

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no site excavation or construction. As a result, less than significant impacts of the project related to geology, soils, seismicity, and paleontological resources would be avoided.

Greenhouse Gas Emissions

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site. Without construction and operation of the proposed Project, there would be no new GHG emissions requiring mitigation under CEQA.

Hazards and Hazardous Materials

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no site excavation or construction. As a result, existing regulatory documents, including multiple land use controls would remain in place and the need for mitigation to address significant impacts of the Project related to hazards and hazardous materials would be avoided.

Hydrology and Water Quality

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no site excavation or construction and no changes to site drainage and utilities. As a result, most stormwater would continue to be collected and discharged through existing facilities, and some would reach the Oakland-Alameda Estuary (Estuary) by sheetflow. No improvements would address infiltration/inflow from sewage pipes and the Port's MS4 permit would continue to apply. Less than significant project impacts related to hydrology and water quality would be avoided.

¹ There are two conflicting studies regarding Crane X-422, one of which concludes that the crane is an historic resource and one that does not. To be conservative, this EIR considers the crane an historic resource and concludes that its removal would be a significant and unavoidable impact despite the identification of mitigation.

Land Use

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, no impacts would occur. The Project site would continue to be leased for maritime support uses, and existing uses including truck parking, loaded and empty container storage and staging, transloading (i.e. logistics) facilities, and a longshoreperson training facility, would remain in place. With no change in use, impacts on the Seaport and land use compatibility concerns between Project uses and nearby industrial uses would be avoided, and there would be no need for mitigation of these impacts. The site would not develop as anticipated when it was included in *Plan Bay Area 2040's* Oakland Downtown & Jack London Square Priority Development Area (PDA).

Noise and Vibration

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore, there would be no changes to the noise environment. As a result, significant and unavoidable impacts of the proposed Project would be avoided, including: **Impact NOI-1**, temporary or periodic increases in noise from construction; **Impact NOI-2**, groundborne vibration during construction; **Impact NOI-3**, increased noise due to Project-related traffic and concert events at the ballpark; **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic.

Population and Housing

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and therefore less than significant impacts of the Project related to population and housing would be avoided. There would be no new housing or jobs as anticipated with the Project.

Public Services, Recreation and Utilities

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would therefore be no increase in demand for public services, recreation, or utilities. As a result, less than significant impacts of the project related to these topics would be avoided. There would be no new recreational open space provided and no infrastructure improvements to eliminate infiltration of stormwater into EBMUD's wastewater treatment system.

Transportation

Under Alternative 1, the No Project Alternative, no physical changes would occur at the Project site, and there would be no demand for additional trips (vehicle, transit, pedestrian and bicycle trips) to and from the site. There would also be no increase in traffic congestion associated with the Project, and significant and unavoidable impacts associated with the Project would be avoided, including: **Impact TRANS-2**, additional multimodal traffic across at-grade railroad crossings that would expose users to a permanent or substantial hazard; **Impact TRANS-2.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings; **Impact TRANS-4**, increased congestion on two regional roadway segments included in the Alameda County CMP; and **Impact TRANS-4.CU**, contribution to increased congestion on eight roadway segments included in the Alameda County CMP. With this alternative, there would also be no opportunity

implement the Aerial Gondola Variant and off-site improvements proposed by the Project would not be implemented, including those intended to improve pedestrian and bicycle access and address safety along the rail corridor.

6.2.2 Alternative 2: The Off-Site (Coliseum Area) Alternative

Under this alternative, Howard Terminal would remain in its current use and the Oakland A's would construct a new ballpark and their proposed mixed-use development at the site of the Oakland Coliseum. No physical changes would occur at Howard Terminal, which would remain in use by short-term tenants of the Port of Oakland for maritime support uses. Uses and activities at Howard Terminal would continue to include truck parking, loaded and empty container storage and staging, transloading (i.e., logistics) facilities, longshoreperson training facilities, and occasional berthing of vessels for repair. There would continue to be no public access on Howard Terminal and on- and off-site park and open space improvements proposed as part of the Project would not be constructed. No changes would be made to the regulatory documents governing site uses and maintenance given hazardous materials in the soil and groundwater, no changes would be made to stormwater runoff, and there would be no increased demand for potable water, wastewater treatment, or public services.

Neither of the Project variants analyzed in Chapter 5 would be implemented with the Off-Site (Coliseum Area) Alternative and the Peaker Power Plant, located in the historic Pacific Gas & Electric (PG&E) Station C facility on the northern portion of the Howard Terminal site, would continue operation as a 165 Mega-Watt (MW) jet fuel power generation facility in accordance with the Reliability Must Run designation by the California ISO.

At the Oakland Coliseum site, this alternative would remove the existing Coliseum building and replace it with a new ballpark, retain the existing Arena, and develop the same mix and density of uses that are proposed with the Project at Howard Terminal. This mix and density of uses would be slightly different than anticipated in the City's adopted Coliseum Area Specific Plan (CASP), for which an EIR was prepared and certified in 2015. As a result, a CASP amendment would be required.

Characteristics of the Off-Site (Coliseum Area) Alternative would be most similar to those analyzed for the Coliseum District in the CASP EIR Alternative 2C, which included construction of a new stadium and retention of the existing arena, although the No Project Alternative would occur on a smaller site than the 253-acre "Coliseum District" analyzed in CASP EIR Alternative 2C. As shown in **Figure 6-1, Location of Off-Site (Coliseum Area) Alternative**, the approximately 253-acre Coliseum District defined in the CASP EIR is more than twice the size of the 112-acre Oakland-Alameda County Coliseum complex and the 120-acre site of the No Project Alternative because it includes adjacent properties along San Leandro Street, the Coliseum BART station and parking lot, as well as an area west of I-880 that was envisioned as the possible site for a new arena in the CASP.

Figure 6-1 Location of Off-Site (Coliseum Area) Alternative

Analysis of Alternative 2: The Off-Site (Coliseum Area) Alternative

Impacts of Alternative 2 at the Project site would be the same as with Alternative 1, the No Project Alternative, and are not repeated below. Instead, the analysis below focuses on potential impacts that could occur as a result of construction and operation of a new ballpark and other land uses at the Coliseum site. The analysis of potential impacts draws on information and analysis in the CASP EIR with regard to CASP EIR Alternative 2C, which is similar but not identical to the Off-Site Alternative evaluated here, as shown in **Table 6-1** below. As a result, the analysis in this section estimates impacts that vary somewhat from those identified in the CASP EIR. In addition, this analysis assumes that the City's Standard Conditions of Approval (SCAs), which are not applicable at the Project site for the reasons explained in Section 4.0, would be applicable at the Coliseum site as anticipated in the CASP EIR.

TABLE 6-1
COMPARISON OF ALTERNATIVE 2: OFF-SITE (COLISEUM AREA) ALTERNATIVE^a WITH THE PROPOSED PROJECT

	Alternative 2: Off-Site (Coliseum Area) Alternative	Alternative 2C Analyzed in the CASP EIR^a
Site Acreage	Approximately 120 acres ^b	Approximately 253 acres ^b
Sports/Performance Venues		
ballpark	35,000 capacity	39,000 capacity (new)
arena	19,000 capacity (existing)	19,000 capacity (existing)
Other	3,500 capacity performance venue	none
Other Land Uses		
Residential	3,000 dwelling units	4,000 dwelling units
Office	1.5 M sq. ft.	1.5 M sq. ft. ("science & technology space")
Hotel	400 rooms in one or more hotel(s)	850 rooms in 3 hotels
Retail	270,000 sq. ft. retail/restaurant	415,000 sq. ft. retail
Open Space	18.2 acres	26.5 acres
Parking		
Total	8,900 spaces + 800 spaces for the arena	18,170 spaces

NOTES:

^a See City of Oakland, Coliseum Area Specific Plan (CASP) EIR, Chapter 5, Alternative #2C, p. 5-14 and Chapter 3, Project Description, p. 3-50. Alternative 2C in the CASP EIR would have the same intensity of uses as development anticipated under the CASP, except that it would not include a new football stadium and the existing arena would be reused.

^b The Coliseum complex is approximately 112 acres and approximately 120 acres with the addition of parcels owned by the City and the County. It is a subset of the 253-acre Coliseum District, which was planned for in the City's CASP and analyzed in the CASP EIR. This alternative assumes the existing arena would be retained on the site, and approximately 800 additional parking spaces associated with the arena would be retained and added to the parking proposed as part of the Project and the off-site alternative.

SOURCE: Environmental Science Associates, 2019

Aesthetics, Shadow, Wind

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar but not identical to Alternative 2C analyzed in the CASP EIR, which found that there would be no significant impacts related to views, wind, and light and glare in the Coliseum District after implementation of the City of Oakland's standard condition of approval (SCA)

requiring a lighting plan to reduce substantial light or glare. Because the Off-Site Alternative would have a similar development program, it would result in similar light and glare, which would be reduced via the same SCAs. With regard to shading, the CASP EIR identified a mitigation measure to ensure that shading from structures in the Coliseum District would avoid casting shadows on solar panels at Lion Creek Crossings apartments such that solar effectiveness would be compromised, and required compensatory funding for extra power costs if this could not be achieved. This mitigation measure would similarly reduce impacts of the Off-Site Alternative to less than significant.

A potential impact and mitigation measure requiring a wind study for structures over 100 feet was deemed necessary in the CASP EIR within 100 feet of San Leandro Bay, but was specifically not required for development in the Coliseum District, which is $\frac{3}{4}$ miles away from the Bay shore. Alternative 2 would therefore avoid Project **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion.

Air Quality

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be the same as that proposed under the proposed Project and similar to Alternative 2C analyzed in the CASP EIR, except that there would be fewer parking spaces provided, and thus more emphasis on modes of travel other than the private automobile. The CASP EIR found that there would be significant and unavoidable impacts associated with criteria pollutant emissions during construction and operation of development in the Coliseum District under the CASP, and that these impacts could be reduced during construction via implementation of SCAs and mitigation measures designed to reduce Toxic Air Contaminant (TAC) emissions from construction equipment, but not to a level that is less than significant. The criteria pollutant emissions and mitigation associated with Alternative 2 would be similar to those with the Project at Howard Terminal given the same development program, and emissions are likely to be less than Alternative 2C in the CASP EIR because of the lower parking numbers, dwelling units and hotel rooms associated with Alternative 2 (See Table 6-5 Comparison of Key Air Quality and Greenhouse Gas Emissions). While TAC emissions for Alternative 2 would likely be less than was analyzed in the CASP EIR for the same reason (lower parking numbers, dwelling units, and hotel rooms with Alternative 2), health risks are informed by site-specific conditions including the proximity of sensitive receptors to TAC emissions sources (such as construction equipment, emergency generators, and operational vehicle traffic). For this reason, off-site health risks of Alternative 2 would be similar to, but less than those reported in the CASP EIR.

Overall, the Off-Site Alternative would be similar in intensity to the proposed Project, and would have similar air quality impacts. It would not avoid the significant and unavoidable air quality impacts associated with the Project, including: **Impact AIR-1**, construction-related emissions of NO_x; **Impact AIR-2**, operation plus construction-related emissions of ROG, NO_x, and PM₁₀; **Impact AIR-1.CU**, construction-related contributions to cumulative regional air quality impacts

associated with criteria pollutants, and **Impact AIR-2.CU**, cumulative health risk impacts on sensitive receptors.²

Biological Resources

The new ballpark and new development that would occur at the Coliseum site under Alternative 2, the Off-Site Alternative, would be similar to Alternative 2C analyzed in the CASP EIR, which found that biological impacts associated with construction and operations in the Coliseum District, including the proposed realignment of Elmhurst Creek and enhancements of Damon Slough, could be reduced to less than significant with implementation of SCA's and mitigation measures requiring the following:

- pre-construction nesting bird surveys and buffers;
- in-water work restrictions;
- salt marsh protection;
- vegetation plan for sensitive communities;
- Damon Slough bridge replacement structure placement;
- Elmhurst Creek bridge replacement structure placement (only applies in one design option identified for Elmhurst Creek and Damon Slough);
- Coastal scrub restoration (only applies in one design option);
- Realigned portion of Elmhurst Creek (only applies in one design option);
- "Cruise America" tidal wetland (only applies in one design option);
- Boat dock prohibition; and
- Herbicide/pesticide control.

Alternative 2, the Off-Site Alternative, would affect a smaller geographic area than CASP EIR Alternative 2C, although it would include somewhat more development on the 120-acre portion of the site between I-80 and the railroad tracks. As a result, the Off-Site Alternative would also result in less than significant impacts with the application of SCA's. Also, with a similar amount of development as proposed on the Project site, Alternative 2 would have similar impacts to birds and bats as the project, and these impacts would be addressed via the implementation of SCAs identified in the CASP EIR. Significant and unavoidable cumulative impacts on biological resources identified in the CASP EIR were associated with elements of the CASP outside the Coliseum District, and therefore would not be applicable to Alternative 2.³ Based on this information, similar to the proposed Project, Alternative 2 would not result in significant and unavoidable biological impacts provided that identified mitigation measures are implemented prior to construction.

² As shown in Table 6-5, the CASP EIR does not quantify cumulative health risks for off-site receptors and concludes that cumulative health risks for on-site receptors would be less than significant with SCAs, however the EIR concludes that cumulative TAC emissions would be significant and unavoidable.

³ While a significant cumulative impact is identified in the EIR, the explanation of its significance after mitigation on p. 4.3-71 of the Draft EIR explains that it is the possible wide-ranging impacts of the proposed Bay Inlet cut and the filling and development of Edgewater Seasonal Wetlands that result in the impact being unavoidable. These project features are not within the area affected by Alternative 2, the Off-Site Alternative.

Cultural and Tribal Resources

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that there would be a significant and unavoidable impact related to demolition of the Oakland Coliseum, due to an adverse change in the significance of the Oakland Coliseum and Arena Complex, a historical resource under CEQA. Based on this information, even with applicable mitigation measures from the CASP EIR (site recordation, public interpretation program, financial contribution to historic preservation projects), Alternative 2, the Off-Site Alternative, would result in a significant and unavoidable impact related to demolition of the Coliseum that would not occur with the proposed Project. However Alternative 2 would avoid significant and unavoidable impacts associated with the Project's potential removal of Crane X-422 (which is the subject of competing studies and conservatively evaluated as an historic resource). Alternative 2 would also avoid significant and unavoidable cultural resources impacts of the variants analyzed in conjunction with the proposed Project. Specifically, significant and unavoidable impacts associated with changes to the Peaker Power Plant and Aerial Gondola Variants would not occur.

Impacts to archaeological resources under Alternative 2 would be less than significant with implementation of the City's SCAs; thus, implementation of mitigation measures to address impacts of the proposed Project would not be required.

Energy

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to the proposed Project, although given the additional intensity of uses (i.e., the existing arena and its associated parking), the amount of energy used at the site would be somewhat greater. The development would be subject to SCAs, which would result in less than significant impacts similar to the Project.⁴

Geology

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that no significant and unavoidable impact would result from seismicity, erosion, expansive soils, the presence of wells/pits, landfills for which there is no closure plan, due to site conditions and the application of the City's SCAs. As a result, similar to the proposed Project, Alternative 2 would not result in significant and unavoidable impacts related to geology and soils.

Greenhouse Gas Emissions

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to the Project proposed at Howard Terminal, except it would not be subject to the "no net additional" GHG emissions requirement of AB 734.

⁴ The 2015 CASP EIR does not contain an analysis of energy use and these conclusions are based on an understanding of the City's green building ordinance and other SCAs that would apply to new development in the Coliseum District.

The Off-Site Alternative would be similar to Alternative 2C analyzed in the CASP EIR, albeit with fewer parking spaces and therefore a greater emphasis on alternatives to the private automobile. The CASP EIR found that no significant and unavoidable impact would result from GHG emissions and utilized project-level significance thresholds for Coliseum District development based on the Bay Area Air Quality Management District (BAAQMD) Guidelines, concluding that the CASP project's net emissions would exceed 1,100 MT of CO₂e and 4.6 MT of CO₂e per service population annually, however preparation of project-specific GHG Reduction Plans for individual development projects would reduce the emissions to below the 4.6 MT per service population threshold. The EIR also analyzed a variation of Alternative 2C and found that its net emissions would not exceed either project-level threshold.

Based on the emissions resulting from the Project at Howard Terminal, net additional emissions associated with the Off-Site Alternative are estimated at 52,956 MT CO₂e annually prior to implementation of SCAs, as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts. With the expectation that project-specific Reduction Plans for individual development projects would be required to achieve the 4.6 MT of CO₂e per service population standard, total annual emissions would be at or below 52,956 MT CO₂e annually following implementation of the SCAs.⁵ This would be greater than emissions under the proposed Project, which would implement mitigation to achieve zero net additional emissions.

Hazards and Hazardous Materials

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which describes potential sources of soil and groundwater contamination within and near the Coliseum District and 31 specific sites on or near the Coliseum District that are included in regulatory databases. As of the date of the CASP EIR, the status of these sites varied greatly, meaning that some had been closed, some were being characterized, some were undergoing remediation, and some were subject to land use limitations. Based on this information, it is likely that regulatory agency oversight would be required to implement Alternative 2, the Off-Site Alternative.

This was acknowledged in the CASP EIR, which concluded that impacts related to hazards would be less than significant due to compliance with City of Oakland Municipal Code requirements for a Hazardous Materials Assessment Report and Remediation Plan (HMARRP), and implementation of the City's SCAs including use of best management practices (BPMs), site assessment and a health and safety plan if needed, a hazardous materials business plan, site review by the fire services division, and improvements to the public right of way related to emergency access/egress. With these requirements in place, Alternative 2 impacts related to hazards and hazardous materials would be less than significant, similar to the proposed Project with mitigation.

⁵ This analysis assumes that GHG emissions resulting from Alternative 2 would be similar to those resulting from the proposed Project because the development programs would be the same. However, Alternative 2 would not be subject to the "no net additional" provisions of AB 734 and would implement the City's SCA rather than the mitigation identified in Section 4.7

Hydrology and Water Quality

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that impacts associated with drainage and water quality, stormwater flows, and flood hazards would be less than significant with implementation of the City's SCAs.

The analysis of sea level rise indicated that a vast majority of the Coliseum District would be exposed to inundation assuming 55" of sea level rise by 2100 (BCDC's estimates c. 2011), and resulted in site-specific recommendations designed to address the 2050 estimate of 16" of sea level rise. While these requirements were deemed sufficient to reduce impacts of Alternative 2C to less than significant, more recent estimates of sea level rise and changes in FEMA flood maps would likely require additional measures as individual development projects are implemented. With this assumption, Alternative 2 impacts related to hydrology and water quality would be less than significant, similar to the proposed Project.

Land Use

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to Alternative 2C analyzed in the CASP EIR, which found that impacts related to land use compatibility (e.g. residents' exposure to noise) would be less than significant with implementation of the City's SCAs and a requirement for disclosure statement as part of real estate transactions. The CASP EIR also found a less than significant impact related to General Plan conflicts and zoning inconsistencies.

Potentially significant land use impacts associated with Airport Land Use Compatibility Plan were reduced to less than significant with inclusion of mitigation measures. The CASP EIR explains that the Coliseum District is in Airport Land Use Compatibility Plan (ALUCP) Zone 7, where there are no land use restrictions, and high capacity indoor assembly rooms (i.e. greater than 1,000 people), professional sports arenas, and concert halls are allowable in Zone 7 if no other suitable site outside the Airport Influence Area is available.

The ALUCP would apply to the Off-Site Alternative at the Coliseum site, unlike the proposed Project at Howard Terminal, although related impacts would be less than significant, as with the CASP EIR Alternative 2C, for the reason explained above. In addition, potential impacts of the proposed Project related to land use compatibility would not occur at the Coliseum site, because the Coliseum site is not adjacent to maritime uses like Howard Terminal, and no mitigation would be required. In sum, the Off-Site Alternative, like the proposed Project, would result in no significant land use impacts after the implementation of SCAs or mitigation.

Noise and Vibration

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would have the same development program as the Project at Howard Terminal and would be similar to Alternative 2C analyzed in the CASP EIR. The CASP EIR found a significant and unavoidable impact related to exposure of new on-site receptors to noise from game day and

special event noise.⁶ Construction noise and vibration and other operational noise impacts, including traffic noise impacts, were found to be less than significant with implementation of the City's SCAs. Based on this conclusion, because existing residential receptors are farther than the site than they would be at Howard Terminal, and because SCAs identified in the CASP EIR would apply, Alternative 2 would avoid four significant and unavoidable impacts of the Project: **Impact NOI-1**, temporary or periodic increases in noise from construction; **Impact NOI-2**, groundborne vibration during construction; **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic. One noise impact of the project would remain significant and unavoidable under this alternative: **Impact NOI-3**, increased noise due to Project-related traffic and concert events at the ballpark. Given the same frequency of events and only incrementally higher traffic volumes (due to 800 additional parking spaces) than associated with the Project at Howard Terminal, the significant and unavoidable impact is likely to be no more or less severe than with the proposed Project.

Population and Housing

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would be similar to that proposed with the Project at Howard Terminal and similar to Alternative 2C analyzed in the CASP EIR. Similar to the Project (see Table 4.12-7 and 4.12-8), the Off-Site Alternative would add an estimated 6,000 residents to the Coliseum site, as well as an estimated 7,987 new jobs due to the additional commercial development. No existing residents would be displaced, and the growth would be in keeping with regional projections. For this reason, and because the CASP EIR found less than significant impacts related to population and housing, Alternative 2's population and housing impacts would be less than significant, similar to the proposed Project.

Public Services, Recreation and Utilities

The size of the new ballpark and the intensity of new development that would occur at the Coliseum site under Alternative 2 would be consistent with the Project proposed for Howard Terminal and similar to Alternative 2C analyzed in the CASP EIR. The demand for public services, recreation, and utilities would therefore be similar to those with the project. For this reason, and because the CASP EIR found that impacts related to public services, recreation, and utilities would be less than significant, in some cases based on implementation of the City's SCAs and mitigation measures, Alternative 2's public services, recreation, and utilities impacts would be less than significant, similar to the proposed Project at Howard Terminal.

Transportation

The new ballpark and new development that would occur at the Coliseum site under Alternative 2 would have the same mix and intensity of uses as the Project at Howard Terminal, except there would be some additional parking available on site due to the presence of the exiting Arena. For

⁶ The CASP EIR indicated that EIR Alternative 2C would have fewer instances of significant noise impacts on residential uses than the CASP project because it would only include one stadium, however the impact would remain significant and unavoidable. This impact is no longer considered a CEQA impact because it would constitute an impact of the environment on the project or an impact of the project on itself.

this reason, vehicle trips associated with the Off-Site Alternative could be slightly higher than those with the proposed Project at Howard Terminal. Vehicle trips would also be markedly less than those associated with Alternative 2C in the CASP EIR, because the CASP allowed for almost double the number of parking spaces as the proposed Project.

The CASP EIR found 34 transportation impacts associated with proposed development in the Coliseum District. All these impacts were based on intersection performance, expressed in terms of Level of Service (LOS), delay, volume to capacity (V/C) ratio, or meeting signal warrants, which are no longer the basis for determining significant and unavoidable impacts in Oakland. The CASP EIR also identified a significant and unavoidable impact (Trans-80) associated with event-day traffic due to uncertainty about the effectiveness of a traffic management plan. These impacts are no longer considered significant by the City of Oakland, which now reviews vehicular traffic by assessing per capita VMT.

While total VMT and VMP per capita has not been calculated for the Off-Site Alternative, the somewhat more parking available than the Project at Howard Terminal and the location farther away from downtown Oakland, suggests that traffic volumes – and therefore VMT – could be somewhat higher than with the proposed Project. While not directly comparable, the effect of a greater parking supply and location on VMT per service population can be seen by comparing the existing VMT per baseball attendee at the Coliseum site to the projected VMT per baseball attendee at the Howard terminal site. (See **Table 6-2, Comparison of VMT per Attendee at the Coliseum and with the Proposed Project** below.) Based on this comparison, it is likely that VMT per service population with Alternative 2 would be greater than with the proposed Project, although it would be reduced with the SCAs regarding trip reductions (SCA Trans-3 Parking and Transportation Demand Management) referenced in the CASP EIR and would likely be less than significant.

TABLE 6-2
COMPARISON OF VEHICLE MILES TRAVELLED (VMT) PER ATTENDEE AT THE COLISEUM AND PER ATTENDEE AT THE BALLPARK PROPOSED WITH THE PROPOSED PROJECT^a

Event Type	Existing VMT Per Attendee at the Coliseum (based on 2017 data)	Projected VMT Per Ballpark Attendee in the Off-Site Alternative (with trip reduction measures)	Projected VMT Per Ballpark Attendee with the Proposed Project at Howard Terminal (without trip reduction measures)	Projected VMT Per Ballpark Attendee with the Proposed Project at Howard Terminal (with trip reduction measures)
Weekday Evening Game	10.1	7.9	10.1	8.2
Weekday Midday Game	10.6	8.4	10.2	8.2
Weekend Game	11.4	8.9	11.3	8.7
Large Concerts	11.5	7.7	9.0	7.2

Notes: (a) Does not include VMT from development other than the ballpark.

SOURCE: Fehr & Peers, September 2018

The CASP EIR concluded that Coliseum District development would result in increased congestion on nine roadway segments included in the Alameda County CMP or MTS (Trans-76) and would contribute to cumulative increases in congestion on thirteen roadway segments (Trans-78). These impacts would be Significant and Unavoidable, and would affect more locations than similar significant and unavoidable impacts with the proposed Project: **Impact TRANS-4**, increased congestion on two regional roadway segments included in the Alameda County CMP, and **Impact TRANS-4.CU**, contribution to increased congestion on eight roadway segments included in the Alameda County CMP.

The CASP EIR also concluded there would be a significant and unavoidable impact associated with increased traffic (all modes) across at-grade railroad crossings (Trans-85), because of the lack of certainty that grade separations or other improvements identified in SCA-5 would be feasible. This suggests that Alternative 2 would have similar Significant and Unavoidable Impacts as the proposed Project: **Impact TRANS-2**, additional multimodal traffic across at-grade railroad crossings that would expose users to a permanent or substantial hazard, and **Impact TRANS-2.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings.

6.2.3 Alternative 3: The Proposed Project with Grade Separation Alternative

Alternative 3 would construct the proposed Project at the Project site and would also include construction of a grade-separated crossing of the railroad tracks for vehicles accessing the site. This alternative would also still construct the pedestrian and bicycle overcrossing and other off-site improvements included as mitigation in Section 4.15, *Transportation and Circulation* to address safety at at-grade railroad crossings.

There are two potential locations for the grade-separated vehicular crossing under this alternative, one at Market Street and one at Brush Street, as well as two possible designs for each location – an underpass or an overcrossing. In all options, this alternative assumes that the grade crossing would be for vehicles only (i.e. no pedestrian or bicycle use) and would utilize a 9% vertical profile (slope), a 250 horizontal radius for the roadway curve, and four-foot wide shoulders. With these features, variances would be required as follows:

- A design variance on the vertical profile grade would be required to permit use of the American Association of State Highway and Transportation Officials (AASHTO) standard of a 9% grade rather than the City standard (based on Caltrans' standard) of 8% grade;
- In all design options, a design variance would be required for outside shoulder widths needed for sight distance along the curve, and in underpass options a similar variance would be required for the inside shoulder; and
- A design variance would be required from the Railroad to allow a skewed angle crossing of the railroad tracks.

In addition, the designs would have to provide a one-foot minimum clearance over the EBMUD interceptor.

As shown in **Figure 6-2, Grade Separation Alternative - Market Street Undercrossing Option**, the Market Street undercrossing option would follow the Market Street alignment from south of Third Street to a point about one third of the way to the rail corridor, turn to the west, and descend under the railroad tracks. The roadway would return to grade along the northern edge of the site on the proposed extension of Embarcadero West south of the railroad tracks. From there, vehicles accessing the ballpark would have to turn left (south) along Linden Street and the left again (east) along one of the east-west streets proposed on site. Schnitzer Steel trucks would continue straight along Embarcadero West. An overcrossing (rather than an undercrossing) could be constructed in roughly the same alignment as shown in **Figure 6-3, Grade Separation Alternative - Market Street Overcrossing Option**.

As shown in **Figure 6-4, Grade Separation Alternative -- Brush Street Undercrossing Option**, the Brush Street undercrossing option would construct an undercrossing that would follow the Brush Street alignment from south of Third Street to Second Street, turn to the west, and descend under the railroad. The roadway would start ascending as it crosses under Market Street. The roadway would return to grade along the northern edge of the site on the proposed extension of Embarcadero West south of the railroad tracks. From there, vehicles accessing the ballpark would have to turn left (south) along Filbert Street and the left again (east) along one of the east-west streets proposed on site. Schnitzer Steel trucks would continue straight along Embarcadero West. An overcrossing (rather than an undercrossing) could be constructed in roughly the same alignment, as shown in **Figure 6-5, Grade Separation Alternative -- Brush Street Overcrossing Option**.

With the Brush Street alignment, the existing Market Street at-grade crossing could remain open, with a minimum clearance of 16.5 feet. Market Street could therefore provide access to the site for vehicles, bicycles and pedestrians at all times, at select times, or for certain types of vehicles (for example, only when traffic is exiting the site after a baseball game, or only for service vehicles and deliveries, or only for pedestrians and bicyclists). The Brush Street alignment would require terminating 2nd Street in a cul-de-sac rather than a T-intersection, and would mean that transit vehicles could not use Brush Street, as proposed with the Project, and would have to use another nearby street.

With both the Market Street and Brush Street alignments, Alternative 3 would primarily be located within the public right-of-way and the railroad corridor, however in each case at least one property acquisition would be required where the alignment would intrude onto a privately-owned parcel (Market Street alignment) or a publically-owned parcel (Brush Street alignment). The Brush Street alignment could also require property acquisition to accommodate termination of Second Street in a cul-de-sac (rather than a T-intersection with Brush).

Figure 6-2 Grade Separation Alternative -- Market Street Undercrossing Option

Figure 6-3 Grade Separation Alternative -- Market Street Overcrossing Option

Figure 6-4 Grade Separation Alternative -- Brush Street Undercrossing Option

Figure 6-5 Grade Separation Alternative -- Brush Street Overcrossing Option

With both the Market Street and Brush Street alignments, Alternative 3 would also constrain driveway access to some parcels where the roadway descends to go under or rises to go over the railroad tracks. Specifically, the Market Street alignment would affect up to five driveways, three serving privately-owned parcels, and two serving publicly-owned parcels. The Brush Street alignment would affect up to 12 driveways serving seven parcels, of which five are privately-owned and two are publicly-owned. In these instances, the Project sponsor would work with affected property owners to relocate driveways and potentially reconfigure vehicle, bicycle, and pedestrian access and parking.

Substantial utility relocations would be required for all options and the presence of an underground 105-inch EBMUD Interceptor located in portions of 2nd and 3rd Street represents a potential constraint for the underground options, which would be more complicated to construct and more expensive than the above ground options. During construction of a grade separated crossing on either alignment, an undercrossing would require excavation and removal of 56,000 to 59,000 cubic yards of soil (BKF & Athletics, January 14, 2020).

All undercrossing and overcrossing options would also require slight adjustments to the size of development blocks 10 and 15 on the Project site, but neither would change the total amount or types of development proposed with the Project as a whole.

In addition to the same approvals required from the City, the Port, and other agencies for the proposed Project, Alternative 3 would also require additional approvals by those entities, as well as other organizations and agencies, as well as private parties. At a minimum, approvals would be needed from the Union Pacific Railroad (UPRR) (as the property owner of a majority of the land required to cross below or over the tracks) and from the California Public Utilities Commission (CPUC) for construction over or under the rail corridor. Private property acquisition would also be required, and additional coordination would be needed with utility providers for utility relocation and other accommodations and with the Department of Toxic Substances Control (DTSC) for excavation and removal of additional contaminated soils.

Like the proposed Project, Alternative 3 may or may not include implementation of the Peaker Power Plant Variant and the Aerial Gondola Variant. Alternative 3 would not change the analysis for these variants. Impacts of these variants are described in Chapter 5.

Analysis of Alternative 3: The Proposed Project with Grade Separation Alternative

Aesthetics, Shadow, Wind

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. With the new access road along Embarcadero West, Blocks 10 and 15 on the Project site could be reduced in size when compared to the proposed Project, however the resulting potential reallocation of density to other blocks would remain within the overall envelop shown in the massing diagrams in Section 4.1. For this reason, views, shading, light and glare, and wind conditions attributable to Alternative 3 would be similar to those with the proposed Project, except for the changes that would occur if an above-

ground overcrossing design option is selected for either the Market Street or the Bush Street alignment.

Any new overcrossing would be visible from publicly accessible locations near the Project site, including sidewalks along affected nearby streets. The overcrossing would be lower in height than Project buildings, which would be up to 400 feet high and are depicted in the visual simulations in Section 4.1, *Aesthetics*, in Chapter 4. Like the proposed Project, an overcrossing would not be visible from previously selected key viewpoints due to intervening development nor would it obstruct views of scenic resources such as the Oakland hills, the downtown Oakland skyline, or of the Bay, although they could affect a scenic resource, the Southern Pacific Railroad API, as discussed under Cultural Resources heading below. Railroad overcrossings are large and noticeable, but are also common features of urban environments, including nearby at the Port of Oakland and in Jack London Square, where there is a vehicular overcrossing (at Middle Harbor Road) and two pedestrian overcrossings. For this reason, a new overcrossing would not visually contrast with the area or substantially degrade the existing visual character.

With regard to wind, overcrossings do not have characteristics that create measurable wind impacts, such as large building masses extending substantially above their surroundings, or large unarticulated walls that catch a prevailing wind. The overcrossings would be less than 100 feet high. Overcrossings would include lighting, which would be focused down onto the road surface, and would therefore not result in excessive light or glare.

Because the number and height of buildings associated with Alternative 3 would be within the envelop analyzed with the proposed Project, related impacts would be the same, including **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion, which would remain significant and unavoidable under Alternative 3.

Air Quality

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Alternative 3 would also be subject to the same air quality-related mitigation measures as the proposed Project. The introduction of a grade separated crossing of the railroad tracks would not substantially alter modes of travel used to access the site (i.e. increase traffic), or alter travel patterns outside the immediate area, as discussed under the Transportation heading below. Also, the same vehicle trip reduction measures would apply, resulting in similar air pollutant emissions from mobile sources as the proposed Project.

Construction activity associated with the proposed Project would be the same with Alternative 3, except that additional excavation and construction would be required to build the grade separated crossing. As a result, criteria air pollutant emissions associated with Alternative 3 would be somewhat greater than those with the proposed Project, as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts. As a result, significant and unavoidable impacts of the proposed Project would also occur with Alternative 3: **Impact AIR-1**, construction-related emissions of NO_x, **Impact AIR-2**, operation plus construction-related emissions of ROG, NO_x,

and PM₁₀, and **Impact AIR-1.CU**, construction-related contributions to cumulative regional air quality impacts associated with criteria pollutants. Mitigation measures identified in Section 4.2 would reduce these impacts, but not to a level of less than significant.

TAC emissions would also be higher under Alternative 3 compared to the proposed Project because of the increased construction, and the resulting health risks would be substantially higher due to these increased TAC emissions and the proximity of off-site receptors to the proposed alignments. The existing off-site sensitive receptor location with the maximum cancer impact is immediately east of Brush Street on the north side of the railroad tracks and Alternative 3 would result in mitigated cancer risks of approximately 36 per million with an undercrossing on the Brush Street alignment, which is the closest grade separation alignment to an existing off-site sensitive receptor and the design option with the most construction (and therefore the highest health risks). The resulting significant unavoidable impact (**Impact AIR-4**) would occur with Alternative 3 with the Brush Street alignment and design options, but would not occur with the Market Street alignment for either design option, and would not occur with the Project or any other alternative. This significant impact would be reduced but not eliminated with the overcrossing design option at Brush Street, and would be eliminated with the Market Street alignment with both design options. Specifically, cancer risks at the existing off-site sensitive receptor location would be 30 per million (as opposed to 36) with the overcrossing design option at Brush Street and 21 and 25 per million with the Market Street alignment for the overcrossing and undercrossing design options, respectively. Mitigation measures would be available to reduce these significant health risks, as outlined for Impact AIR-2.CU, but their ability to reduce the impact below the threshold is not assured.

Like the Project, Alternative 3 health risks would exceed the Project threshold for cumulative health risks, resulting in a significant and unavoidable cumulative impact (**Impact AIR-2.CU**). The mitigation measures identified for the proposed Project would apply, but would not reduce the impact to less than significant.

Biological Resources

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. The new under- or over-crossing would be located in a fully developed area, with no natural vegetation. For this reason, less than significant impacts of Alternative 3 would be similar to those with the proposed Project, with similar mitigation. Measures that would be relevant to the grade separated crossing itself include those related to tree removal during nesting bird season (**Mitigation Measure BIO-1a**) and bird collision reduction measures related to lighting (within **Mitigation Measure BIO-1b**).

Cultural and Tribal Resources

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site, involving substantial additional excavation for utility relocation and construction. The new under- or over-crossing would be located in a fully developed area, meaning that it is a disturbed site with multiple underground utilities. For this reason, impacts related to archaeological resources would be reduced to less than significant with the same mitigation measures identified in conjunction with the Project.

The introduction of a grade separated crossing on the Market Street or Brush Street alignment would alter the context of the Southern Pacific Railroad API, which is an historical resource and comprised of relatively low scale (one to four story) buildings along the rail corridor, stretching from Chestnut Street east to Castro Street (See Figure 4.4-1). The API is a grouping of industrial buildings within a railroad setting with character defining features including: simplicity of design, industrial character of the buildings, the large scale of the buildings and their orientation to the railroad tracks, concrete railroad track platforms, and a concentration of buildings with enough open space to allow for a long line of sight/high visibility as a grouping.

While all design options would be noticeable in and around the area, Alternative 3 would not affect the character-defining features of the API described in Section 4.4, *Cultural and Tribal Cultural Resources*, unless an above-grade design option is selected. With an overcrossing passing through the API either at Market Street or Brush Street, the API would no longer be visible as a grouping, and the line of sight along the railroad tracks would be impeded. While this impact could be reduced with a sensitive design for the overcrossing that is both industrial in character and as transparent as possible, the impact of Alternative 3 on the historic resource would be significant and unavoidable. For this reason, with mitigation measures included in Chapters 4 and 5, impacts of Alternative 3 would be similar to those with the proposed Project, except that it could result in a significant and unavoidable impact on the Southern Pacific Railroad API if the above-grade (overcrossing) design option is selected.

Energy

The new ballpark and new development that would occur under Alternative 3 would be similar to the proposed Project, except with additional excavation and construction for the grade separated crossing, which would involve additional energy use. The resulting impact would remain Less than Significant.

As discussed further under the Transportation heading below, traffic patterns could change on the site and in the vicinity with the introduction of a grade separated crossing; however, the changes would be localized and there would be no shift in modes (i.e. no more or less people driving) or substantial lessening of congestion because the railroad crossings are not the primary capacity constraint for drivers accessing the site.⁷ For these reasons, and because it is similar to the proposed Project, Alternative 3 would include vehicle trip reduction measures, transportation-related energy use would not appreciably differ from energy use associated with the proposed Project.

Like the proposed Project, Alternative 3 would also include a requirement for LEED Gold or equivalent sustainability measures, as well as mitigation measures to address significant and unavoidable impacts related to criteria air pollutants. These measures, in combination with building code requirements, would reduce the potential for Alternative 3 to result in wasteful,

⁷ There could be less congestion when a freight train passes through, since vehicles would no longer have to wait for the train to pass; however, freight trains occur an average of five times per day between 11AM and 11PM. As described in Section 4.15, passenger trains are much more frequent; however, gate down times associated with them are generally no more than a traffic signal phase.

inefficient, or unnecessary consumption of fuel or energy, and to fail to incorporate renewable energy or energy efficiency measures into building design, equipment use, transportation, or other project features would result in less-than-significant impacts, similar to the proposed Project.

Geology

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Construction of grade separated under- or over-crossings of the railroad corridor would require additional excavation and construction, and in the case of under-crossings, would require substantial excavation to a depth of 26 feet and removal of 60,000 - 66,000 cubic yards of soil.

Both potential grade crossing alignments are located north of the 1877 mapped shoreline and subsurface materials are expected to consist of (1) 5-10 feet of Non-Engineered Fill; (2) 2-5 feet of Young Bay Mud; (3) about 10 feet of Merritt Sand; and (4) San Antonio Formation. A portion of the alignments are located in a mapped liquefaction hazard zone and may be susceptible to liquefaction.⁸

Design and construction of the over- or under-crossings would be subject to review and approval by the City, the Port, the UPRR, and the CPUC, ensuring compliance with applicable codes and requirements to ensure continued operation of the railroad. Construction of an underpass could utilize a top-down method, with ground improvement techniques such as jet mixing, soil mixing, or ground freezing to keep the excavation stable, or could involve tunneling. In both options, dewatering would be required during construction and the structures would be designed to resist hydrostatic pore water pressure. An overpass would be supported on deep foundations or shallow foundations on ground improvement, and the final design would evaluate the capability of various options, including possible use of drilled or driven piles.

While an extensive geotechnical analysis has not been performed to date, geologic conditions in the vicinity of both possible grade separation alignments are likely to resemble those along the northern perimeter of the Project site. In this context, it appears that construction of both the underpass and overpass design options could be accomplished, although the underpass options would be more complicated and more expensive than the overpass options. With application of existing laws and regulations, potential impacts associated with seismicity, erosion, and site conditions creating risks to life or property would be less than significant. Thus, while potentially involving substantial excavation on- and off-site, Alternative 3 would have less than significant impacts related to geology and seismicity, similar to those with the proposed Project.

Greenhouse Gas Emissions

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site, requiring additional construction and excavation. These additional construction activities could result in additional GHG emissions amortized over 30 years, resulting somewhat higher annual emissions (53,124 MT CO₂e as

⁸ ENGEO, September 24, 2019. Existing setting information in this Geology section is based on this memo, as are the description of construction methods.

opposed to 53,026 MT CO₂e), as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts.

For the reasons described under the Energy and Transportation headings above and below, operational GHG emissions from transportation sources associated with Alternative 3 would not appreciably differ from those with the proposed Project. Other sources of operational emissions would be the same as with the proposed Project because the amount of development would be the same.

Similar to the proposed Project, GHG impacts of Alternative 3 could be reduced to less than significant (i.e., no net additional GHG emissions) with implementation of mitigation measures included in Section 4.7 of this EIR.

Hazards and Hazardous Materials

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Construction of grade separated crossings of the railroad corridor would require substantial additional excavation, involving up to 66,000 cubic yards of excavation with the underpass design options, and less with the overpass options.

Excavation may encounter contaminants of concern due to the proximity of both possible alignments to several sites with subsurface impacts, including the Gas Load Center on the Project site, and 715 4th Street (E-D Coat), 655 3rd Street, 205 Brush Street, and 209 Brush Street.⁹ Should soil classified as hazardous waste be encountered as anticipated, it would be managed as hazardous waste pursuant to CCR Title 22, Division 4.5. Specifically, excavation would be performed by OSHA-certified personnel as needed and required by law; soil would remain on site until characterization is complete unless disposed of as hazardous waste; breathing zones would be monitored for dust control; haul trucks would be covered; and impacted soil would be stockpiled and protected/secured to prevent dust or runoff (ENGEO, 2019).

The undercrossing design options would require dewatering in the immediate vicinity of known impacted groundwater, where free-phase contamination has also been identified. Dewatering operations could mobilize these contaminants, and the engineers would therefore recommend the use of cutoff walls and/or similar options to reduce the amount of dewatering needed and to lessen the potential for contaminant plume mobilization and migration (ENGEO, 2019).

Construction of the grade separated crossings would necessitate additional coordination with DTSC regarding handling of contaminated soils and groundwater, as well as coordination with the UPRR and CPUC. A Soil Management Plan, Groundwater Management Plan, and site-specific Health and Safety Plans would be required. With application of existing laws and regulations, impacts from hazard and hazardous materials associated with Alternative 3 would be less than significant. Regulatory requirements could be met by expanding the remedial action workplan (RAW), land use controls (LUCs), and associated plans associated with the proposed

⁹ ENGEO, September 24, 2019. Also see site descriptions in Section 4.8.

Project, or could be the subject of separate plans and consultation. As with the proposed Project, mitigation measures would be required to ensure compliance with regulatory requirements. (See Mitigation Measures HAZ-1a, HAZ-1b, and HAZ 1-3 in Section 4.8.)

Hydrology and Water Quality

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. As discussed under the Hazards and Hazardous Materials heading above, dewatering could be required to construct the underpass design options, and could mobilize contaminants in the groundwater. To address this issue, the engineers have recommended the use of cutoff walls and/or similar options to reduce the amount of dewatering needed and to lessen the potential for contaminant plume mobilization and migration. Consultation with DTSC would be required and with application of existing laws and regulations and implementation of the mitigation measure included in Section 4.8, *Hazards and Hazardous Materials*, the hydrology and water quality impacts of Alternative 3 would be less than significant, similar to those with the proposed Project.

Land Use

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Intended to reduce potential conflicts between the railroad and those travelling (by vehicle) to and from the Project site, the grade-separated crossing would alter circulation patterns in the blocks immediately north of the Project site and affect a number of parcels and businesses in the area. Specifically:

- both overpass alignments would require overhead encroachment into at least one adjacent property immediately north of the railroad tracks;
- the Brush Street alignment would require a cul-de-sac at the west end of Second Street, eliminating its T-intersection with Brush Street and potentially requiring acquisition of required right-of-way from two adjacent properties;
- an under- or overpass on the Market Street alignment would eliminate up to five driveways currently in use and serving properties along the street, three of which are privately owned;
- an under- or overpass on the Brush Street alignment would eliminate up to 12 driveways currently in use and serving seven properties along the street, five of which are privately owned;
- all design and location options would require relocation of substantial existing utilities, as discussed under the Utilities heading below.

The driveways affected by each alignment in some cases represent a second means of access/egress to a large parcel, or could be relocated to another street frontage. Land uses potentially affected include a PG&E facility, a data center, a Sprint Communications facility, and a home decor store. The Project applicant would coordinate with these and other potentially affected uses/businesses to determine alternate means of access where feasible. For example, in a number of instances, driveway access could be moved to adjacent streets. Alternatively, the Project applicant could offer to compensate the property owners for reduced access or for properties that would lose access.

While some adjacent land uses could be encroached upon or affected by construction of a grade separated crossing in Alternative 3, there is not a residential neighborhood or “community” that would be separated or divided by construction of an under- or overpass in the proposed alignment(s), and the addition of a grade separated crossing largely within existing rights of way would facilitate access, rather than constitute or facilitate a fundamental conflict between adjacent uses. For these reasons, while the potential feasibility of grade separation alignments and design options could be affected by the need to preserve access to nearby land uses, the land use impacts of Alternative 3 would be less than significant with mitigation, similar to those with the proposed Project.

Noise and Vibration

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site resulting in only minor adjustments in local traffic circulation and substantial additional construction activities, including potentially the use of drilled or driven piles for construction of the overcrossing design options.

Because Alternative 3 would result in more noise and vibration during construction and at least one sensitive receptor is located just east of Brush Street north of the railroad tracks, three significant and unavoidable impacts resulting from the proposed Project would potentially increase under this alternative as follows: **Impact NOI-1**, temporary or periodic increases in noise from construction; **Impact NOI-2**, groundborne vibration during construction; **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction. In addition, the following significant and unavoidable noise impacts related to Project operations would remain unchanged in Alternative 3: **Impact NOI-3**, increased noise due to Project-related crowd noise outside the ballpark; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic.

Population and Housing

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Because the amount of development that would occur would be identical, less than significant impacts of Alternative 3 would be similar to those with the proposed Project.

Public Services, Recreation and Utilities

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Because the amount of development that would occur would be identical, less than significant impacts of Alternative 3 related to public services and recreation would be the same as those with the proposed Project.

Construction of grade separated crossings of the railroad corridor would require substantial additional excavation and construction including relocation of multiple existing utilities. Existing storm drain, sanitary sewer, domestic water, gas, electrical and communications utilities would need to be relocated within the right of way or to adjacent streets. Notably, significant communication lines serving the Sprint facility at the corner of Brush and 2nd Streets and the data center in the block bounded by Brush, 2nd, 3rd, and Castro Streets, would need to be relocated in the Brush Street options. In addition, underpass options would reduce cover over a 105-inch

EBMUD sanitary sewer interceptor line, and more investigation would be required to determine if adequate cover can be maintained over this pipe at its current location.¹⁰

While there would be more potential conflicts and relocations of existing utilities with Alternative 3 than with the proposed Project and avoidance of the 105-inch EMBUD sanitary sewer interceptor could affect the potential feasibility of some design options, application of existing laws and regulations, would ensure that impacts would be reduced to less than significant, similar to those with the proposed Project.

Transportation

Alternative 3 would include the same types and amount of development as the proposed Project and would introduce alternative means of access to the site. Substantial additional excavation and construction would be required to build the grade separated crossing, increasing the amount of construction equipment and construction truck traffic to and from the site.

The presence of a grade-separated crossing for vehicles under this Alternative could somewhat redistribute vehicular travel to and from the site, with more vehicles choosing to use the new grade separated crossing. The Brush Street alignment would also increase the capacity of local roadways accessing the site, adding two additional lanes in each direction if Market Street is maintained as an at-grade vehicular crossing.

This increase in local roadway capacity and the potential reduction in delay associated with a new grade-separated crossing would not substantially induce additional automobile travel or result in a mode-shift for several reasons. First, the Project site is effectively a “dead end” and the grade separation would only provide access to the site and adjacent Schnitzer property. Second, with Alternative 3, the site would be developed with the same mix of uses and the same amount of on-site parking as with the proposed Project, so it would generate the same number of vehicle trips as the proposed Project. In addition, traffic changes would be localized on the site and in the site vicinity, and would not remove the vehicle capacity constraint provided by the local street network between 3rd and 7th Streets. Traffic transitions between Brush, Castro, Market, and MLK Jr. Way as well as to/from I-880 within these few blocks and the turning movements required for drivers to navigate through the area effectively comprise a constraint on roadway capacity that would remain in place with Alternative 3, just as with the proposed Project.

With the grade separation in Alternative 3, there could be less congestion when a freight train passes through, since vehicles would no longer have to wait for the train to pass; however, freight trains only occur approximately five times per day between the hours of 11 a.m. and 11 p.m. Passenger trains are much more frequent, but gate down times associated with them are generally no more than a traffic signal phase.¹¹

Because the changes in local traffic circulation with Alternative 3 would not result in a mode shift and the same vehicle trip reduction measures would apply to Alternative 3, VMT impacts of

¹⁰ BKF, August 9, 2019 Grade Separation Memo.

¹¹ Fehr & Peers, September 11, 2019 Email Communication.

Alternative 3 would be less than significant, as with the proposed Project, and the same mitigation measures would ensure effective implementation of the transportation management plan (TMP) and transportation demand management plan (TDM) measures.

The ability to access the site via an over- or undercrossing could mean that more vehicles (and more pedestrians and bicyclists if accommodated in the Market Street alignment design options) would choose this route to travel to the site, rather than crossing the railroad tracks at grade. However, Alternative 3 would perpetuate existing at-grade crossings of the railroad corridor at Martin Luther King Jr. Way, Clay and Washington Streets, and Broadway (and potentially at Market Street if the Brush Street alignment is selected). Because multimodal travel to and from the Project site would continue to use existing at-grade crossings of the railroad tracks, Alternative 3, would reduce but not eliminate the significant and unavoidable impacts associated with at-grade railroad crossings under the proposed Project: **Impact TRANS-2**, additional multimodal traffic crossing the railroad crossings that would expose users to a permanent or substantial hazard, and **Impact TRANS-2.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings.

Alternative 3 would also add the same traffic volumes to congested roadway segments in the County's CMP as the proposed Project, resulting in two significant and unavoidable impacts: **Impact TRANS-4**, increased congestion on two regional roadway segments included in the Alameda County CMP; and **Impact TRANS-4.CU**, contribution to increased congestion on eight roadway segments included in the Alameda County CMP.

6.2.4 Alternative 4: The Reduced Project Alternative

Alternative 4, the Reduced Project Alternative, would include site preparation and phased construction of a new ballpark and other uses; however, commercial and residential development would be at lower densities than with the proposed Project. The site plan for Alternative 4 would be the same as for the proposed Project, with commercial, residential, and mixed use development. All buildings other than the ballpark and the hotel would be no taller than 60 or 70 feet tall and both the amount of construction and the intensity of use of the site would be less than with the proposed Project. **Table 6-3, Comparison of Alternative 4: Reduced Project Alternative with the Proposed Project** provides a summary of the proposed development under Alternative 4 compared to the proposed Project.

TABLE 6-3
COMPARISON OF ALTERNATIVE 4: REDUCED PROJECT ALTERNATIVE WITH THE PROPOSED PROJECT

Land Uses	Alternative 4: Reduced Development Alternative	Proposed Project at Buildout
Ballpark	35,000 capacity	35,000 capacity
Performance venue	3,500 capacity	3,500 capacity
Hotel	400 rooms	400 rooms
Residential	700 dwelling units	3,000 dwelling units
Commercial (Office)	350,000 sq. ft.	1.50 M sq. ft.
Commercial (Retail)	63,000 sq. ft.	270,000 sq. ft.
Parking Spaces	Ballpark: 2,000 Hotel: 200 Residential: 700 Commercial: 163	Ballpark: 2,000 Hotel: 200 Residential: 3,000 Commercial: 3,900
Open Space		
Waterfront Park	10 acres ^a	10 acres ^a
Athletics Way	4.8 acres	4.8 acres
Ballpark Rooftop	3.0 acres	3.0 acres
Plaza Open Space	0.4 acres	0.4 acres

NOTES:

^a 6.35 acres in the Maritime Reserve Scenario.

SOURCE: Environmental Science Associates, 2019

Alternative 4 would provide the same amount of open space as the proposed Project, and parking would be provided within parking structures, on street, and within mixed-use buildings, as envisioned with buildout of the proposed Project. The Maritime Reservation Scenario and one or both of the Project variants could also be implemented in conjunction with the Reduced Project Alternative. **Figure 6-6, Reduced Project Alternative**, and **Figure 6-7, Reduced Project Alternative with Maritime Reservation Scenario**, illustrate development phasing and overall building densities associated with the Reduced Development Alternative with and without the Maritime Reservation Scenario.

Figure 6-6 Reduced Project Alternative

11X17

Figure 6-7 Reduced Project Alternative with Maritime Reservation Scenario

11X17

Analysis of the Reduced Project Alternative

Impacts of the Reduced Project Alternative would generally be less than the proposed Project described in Chapter 4 due to the smaller amount of residential and commercial development and less construction.

Aesthetics, Shadow, Wind

Alternative 4 would include new construction on the Project site, including a ballpark and other buildings likely to be visible from some viewpoints. However, the residential and commercial development in Alternative 4 would be substantially less than with buildout of the proposed Project, and only the hotel and the ballpark would be taller than 100 feet, at approximately 250 feet and 150 feet respectively. This would make the site less visible from many viewpoints than the proposed Project.

Because all buildings other than the ballpark and hotel would be less than 100 feet, Alternative 4 would likely result in fewer wind hazards; however, the site's waterfront location and the height of the hotel and ballpark would result in a significant and unavoidable impact similar to the Project: **Impact AES-5**, exceedance of the 36 mph criterion for more than one hour during daylight hours annually, and **Impact AES-1.CU**, contributions to a significant cumulative exceedance of the wind hazard criterion. The ballpark and hotel would be subject to Mitigation Measure AES-1, which would require a wind impact analysis once a more detailed design is available. Because it is unknown whether the designs could eliminate all wind hazards, the impact would remain significant and unavoidable.

Air Quality

Under Alternative 4, the ballpark, hotel, and performance venue would be constructed in Phase 1, along with 126 dwelling units, 58,000 square feet of office space, and 7,000 square feet of retail. Full buildout would include an additional 574 dwelling units, approximately 292,000 square feet of office space, and 56,000 square feet of retail for a total of 700 dwelling units, 350,000 square feet of office space, and 63,000 square feet of retail.

With the reduced construction and less traffic and energy use due to fewer dwellings and less commercial space, operational criteria pollutant emissions would be below the thresholds of significance. Specifically, as shown in Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts, operational-related NO_x emissions would be up to 53.7 lbs/day with mitigation (less than significant) compared to the Project's 84-180 lbs/day with mitigation (significant and unavoidable). Similarly, operational emissions of ROG and PM₁₀ would be less than the significance threshold and less than the Project with mitigation.

Construction emissions of NO_x would still remain above the thresholds of significance in 2021 (same as the Project), due to the extensive site preparation and grading needed for the Phase 1 ballpark, hotel, and performance venue. Construction emissions were not estimated for Alternative 4, but peak NO_x emissions in 2021 are expected to be similar to (but likely less than) the Project at 81 lbs/day with mitigation (significant and unavoidable). As such, one of the significant and unavoidable impacts of the proposed Project associated with criteria pollutant

emissions would be avoided: **Impact AIR-2**, operation plus construction-related emissions of ROG, NO_x, and PM₁₀. The other two significant and unavoidable impacts of the proposed Project would remain significant and unavoidable for Alternative 4, including: **Impact AIR-1**, construction-related emissions of NO_x; and **Impact AIR-1.CU**, construction- and operational-related contributions to cumulative regional air quality impacts associated with criteria pollutants. (See Appendix AIR.)

Regarding health risks, Alternative 4 would generate fewer construction and operational emissions and fewer TAC emissions, resulting in lower health risks. Like the Project, Alternative 4's health risk at off- and on-site receptors would be less than significant; however, it could contribute to the cumulative health risk identified as significant and unavoidable for the Project.

Biological Resources

Under Alternative 4 construction would occur in the same locations as with the proposed Project, although the intensity of development would be less. For this reason, potential impacts on biological resources would be similar to those identified for the proposed Project, and the same mitigation measures would reduce impacts associated with nesting birds, potential bird strikes, bat roosts, compensation for fill, tree protection and replacement, to less than significant.

Cultural and Tribal Resources

Under Alternative 4, construction would occur in the same locations as with the proposed Project and therefore the potential impacts on historic architectural resources and archaeological and tribal resources would be the same as with the proposed Project. Removal of Crane X-422 (the subject of two studies with differing conclusions and conservatively considered a historical resource) would result in a significant and unavoidable impact. Mitigation measures would reduce but not eliminate this significant impact and mitigation would reduce impacts related to effects of in-water construction on nearby historic ships, effects of construction vibration on land-side historic resources, and effects of sub-surface excavation on cultural and tribal resources and human remains to less than significant. The Peaker Power Plant Variant and the Gondola Variant would result in significant and unavoidable impacts due to their changes to (Peaker Power Plant) or introduction of new features into (Gondola) the Old Oakland ASI.

Energy

Under Alternative 4 energy use would be less than with the proposed Project because there would be less new construction and less overall development, although it is unclear whether benefits of the Peaker Power Plant Variant could be realized with this alternative given the reduced energy demand. Similar to the proposed Project, Alternative 4 would include vehicle trip reductions, and LEED Gold or equivalent measures which, when combined with building code requirements, would reduce the potential for Alternative 4 to result in wasteful, inefficient, or unnecessary consumption of fuel or energy. The alternative would also incorporate renewable energy or energy efficiency measures into building design, equipment use, and transportation. These and other features would result in less than significant impacts, similar to the proposed Project.

Geology

Under Alternative 4 grading and construction activities would occur in the same locations as with the proposed Project and the same building code requirements would apply. For these reasons, potential impacts related to seismicity, erosion, expansive soils and other geologic hazards, and paleontological resources would be less than significant, as with the proposed Project.

Greenhouse Gas Emissions

Alternative 4 would include less construction and less overall development than the proposed Project, and the same vehicle trip reduction measures would apply. As a result, GHG emissions would be less under Alternative 4 than with the proposed Project, and would be less than significant (i.e. net zero) with implementation of mitigation measures included in Section 4.7 of this EIR.

Hazards and Hazardous Materials

Under Alternative 4 construction would take place in the same locations as the proposed project and would involve the same coordination with DTSC regarding excavation of contaminated soils, replacement of the “cap” on site, measures to protect against vapor intrusion, and changes to existing land use controls to permit residential uses. Similar to the proposed Project, hazard and hazardous materials related impacts associated with Alternative 4 would be reduced to less than significant via compliance with regulatory requirements and implementation of mitigation measures included in Section 4.8 of this EIR.

Hydrology and Water Quality

Under Alternative 4, the level of the site would be raised, similar to the proposed Project, and the existing stormwater collection system and outfalls would be replaced. The City’s NPDES permit would apply, and potential impacts to water quality would be reduced to less than significant via compliance with regulatory requirements and implementation of the mitigation measures included in Section 4.9, *Hydrology and Water Quality*, of this EIR.

Land Use

Alternative 4 would include the same types of development as the proposed Project, but with fewer residential units, less office space, and less retail development. As with the Project, land uses on the site would change from maritime support uses to a mix of commercial, residential, public assembly, and open space, and the existing boundary between active maritime industrial uses along the waterfront would shift to the west from the current boundary between Jack London Square and Howard Terminal. Mitigation measures that reduce potential land use conflicts to less than significant would be implemented, and land use impacts of Alternative 4 would be similar to those of the proposed Project.

Noise and Vibration

Under Alternative 4 the ballpark would be constructed along with a lesser amount of other traffic- and noise-generating uses than included in the proposed Project. As a result, significant and unavoidable impacts of the proposed Project would be reduced but would not necessarily be avoided, including: **Impact NOI-1**, temporary or periodic increases in noise from construction;

Impact NOI-2, groundborne vibration during construction; **Impact NOI-1.CU**, contribution to cumulative temporary or periodic increases in noise levels due to construction; and **Impact NOI-2.CU**, contribution to increased noise due to Project-related traffic. Because the ballpark, including related traffic and concert events would be the same under Alternative 4 as with the proposed Project, the related impact would be the same: **Impact NOI-3**, increased noise due to crowds noise outside the ballpark.

Population and Housing

Under Alternative 4 the number of on-site employees and residents would be less than with the proposed Project, and resulting impacts would remain less than significant.

Public Services, Recreation and Utilities

Under Alternative 4 new infrastructure and open spaces would be provided, similar to the proposed Project. With a smaller population, however, demand for services would be less than with the proposed Project, and resulting impacts would remain less than significant.

Transportation

Under Alternative 4 travel to and from events at the ballpark would be subject to the same vehicle trip reduction measures and other strategies included in the TMP as the proposed Project. However, non-ballpark traffic would be less than the amount generated by the proposed Project because the amount of residential and commercial development would be less. As a result, significant and unavoidable impacts associated with the Project would be reduced but not avoided, including: **Impact TRANS-2**, additional multimodal traffic across at-grade railroad crossings that would expose users to a permanent or substantial hazard; and **Impact TRANS-2.CU**, contribution to a cumulative transportation hazard at at-grade rail crossings.

With less non-ballpark traffic, it is possible that regional roadway segments would be less affected compared to the proposed Project; however, Alternative 4 would still generate sufficient traffic to impact some segments included in the Alameda County CMP (**Impact TRANS-4**), and contribute to significant congestion on other segments (**Impact TRANS-4.CU**). These impacts would be reduced, but would still be significant and unavoidable. With this alternative, there would also be an opportunity implement the Aerial Gondola Variant, with the resulting impacts described in Chapter 5.

6.3 Comparative Analysis

CEQA Guidelines Section 15126.6 (a) requires that an EIR evaluate “the comparative merits” of “a range of reasonable alternatives” to the project and Section 15126.6 (d) requires sufficient information to allow “meaningful evaluation, analysis, and comparison with the proposed project,” suggesting that a matrix may be used to facilitate this comparison. Two tables are presented below to allow for comparison between the proposed Project and the alternatives. The first table, **Table 6-4, Comparison of Impacts of the Project and Alternatives**, provides a broad overview of impacts identified throughout this EIR. The second table, **Table 6-5, Comparison of Key Air Quality and Greenhouse Gas Impacts**, focuses in more detail on emissions associated with the Project and alternatives. These tables supplement the information

presented in Table 6-1 and Table 6-3, which inform a comparison of land use characteristics of Alternative 2 and Alternative 4 to land use characteristics of the proposed project.¹²

6.4 Alternatives Considered but Not Analyzed in Detail in the EIR

Pursuant to CEQA Guidelines section 15126.6(c), and EIR should identify any alternatives that were considered by the Lead Agency but were rejected during the scoping process and briefly explain the reasons underlying this decision. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (1) failure to meet most of the basic project objectives; (2) infeasibility; or (3) inability to avoid significant environmental effects. Several other possible alternatives were suggested in response to the Notice of Preparation or identified for other reasons during preparation of this. Each of these alternatives is briefly summarized below, along with the reason it did not warrant in-depth analysis.

In addition, the City received comments expressing support for or opposition to components of the Project or possible variants (such as the Aerial Gondola Variant). Comments also addressed design issues, such as a request that the design of the ballpark incorporate detailing that is compatible with nearby PG&E Substation C, a historic resource. These comments the analysis in Draft reflect design preferences would not result in any changes to the impacts identified with the proposed Project.

6.4.1 Additional Off-Site Alternatives

Over the past approximately ten years, a number of possible sites have been considered for construction of a new ballpark in the City of Oakland. One involved a site at Laney College and one involved a site on the waterfront east of Jack London Square referred to as Victory Court. Laney College owns a 15-acre site near their campus east of the Lake Merritt BART Station and adjacent to the Lake Merritt Channel. The A's proposed to use this site for development of a ballpark in 2016-17; however, in late 2017, the college district's board of trustees elected not to continue talks with the A's, effectively removing the Laney College site as a potential option for a new ballpark. Prior to exploring the Laney College site, the City's Redevelopment Agency explored the potential for a new ballpark on a site that included numerous privately owned properties referred to as Victory Court, which was also near the Lake Merritt Channel, at Embarcadero West and Oak Street. With elimination of redevelopment by the State in early 2012, the site was abandoned and the City began work on the CASP. Neither the Laney College or Victory Court site warrant in-depth analysis because they are not feasible due to the lack of site control by the City or the A's, and the inability to reasonably acquire or otherwise obtain control of either site.

¹² Alternative 1, the No Project Alternative, would have none of the land use characteristics of the proposed Project, and Alternative 3, the Grade Separation Alternative, would have all of the land use characteristics of the proposed Project. Land use characteristics of Alternatives 2 and 4 would differ from those with the proposed Project as illustrated in Tables 6-2 and 6-4.

TABLE 6-4
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
4.1 Aesthetics, Shadow and Wind					
Impact AES-1: Scenic Vistas and Scenic Resources (Criteria 1 and 2)	LTS (Not a CEQA Consideration)	No Impact	LTS with SCAs (Not a CEQA Consideration)	More visual change than with the project, with the same impact conclusion.	Less visual change than with the project, with the same impact conclusion.
Impact AES-2: Visual Character and Quality (Criterion 3)	LTS (Not a CEQA Consideration)	No Impact	LTS with SCAs (Not a CEQA Consideration)	More visual change than with the project, with the same impact conclusion.	Less visual change than with the project, with the same impact conclusion.
Impact AES-3: Light and Glare (Criterion 4)	SU with Improvement Measures (Not a CEQA Consideration)	No Impact	LTS with SCAs (Not a CEQA Consideration)	More lighting than with the project, with the same impact conclusion.	Less lighting than with the project, with the same impact conclusion.
Impact AES-4: Shadow (Criteria 6, 7, 8, and 9)	LTS	No Impact	LTS with Mitigation	More shading than with the project, with the same impact conclusion.	Less shading than with the project, with the same impact conclusion.
Impact AES-5: Wind Hazards (Criterion 10)	SU with mitigation	No Impact	LTS with SCAs	Same impact conclusion as the project.	Fewer tall buildings requiring mitigation, with the same impact conclusion as the project.
Impact AES-1.CU: Cumulative Impacts	Considerable contribution to cumulatively significant wind impacts; SU with mitigation	No Impact	LTS with SCAs	Same impact conclusion as the project.	Fewer tall buildings requiring mitigation, with the same impact conclusion as the project.
4.2 Air Quality					
Impact AIR-1: Construction Impacts/Criteria Pollutants (Criterion 1)	SU with mitigation	No Impact	SU with SCAs and mitigation	More emissions and SU with mitigation	Fewer emissions and SU with mitigation
Impact AIR-2: Operational Impacts/Criteria Pollutants (Criterion 2)	SU with mitigation	Continued emissions from existing land uses No CEQA Impact	Similar emissions and SU with SCAs	Similar emissions and SU with mitigation	Fewer emissions and LTS with mitigation
Impact AIR-3: Carbon Monoxide (Criterion 3)	LTS	Continued emissions from existing land uses No CEQA Impact	Similar emissions and LTS	Similar emissions and LTS	Fewer emissions and LTS

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
44.2 Air Quality (cont.)					
Impact AIR-4: Toxic Air Contaminants/Off-Site Receptors (Criterion 4)	LTS with mitigation	Continued emissions from existing land uses No CEQA Impact	LTS with SCAs and mitigation for construction	More emissions and SU with mitigation	Fewer emissions and LTS with mitigation
Impact AIR-5: Toxic Air Contaminants/On-Site Receptors (Criterion 5)	LTS with mitigation	No Impact	LTS with SCAs and mitigation for construction	Similar emissions and LTS with Mitigation	Fewer emissions and LTS with mitigation
Impact AIR-6: Odors (Criterion 6)	LTS	No Impact	Cumulative SU due to potential exposure of new residents	LTS	LTS
Impact AIR-1.CU: Cumulative Impacts/ Criteria Pollutants	SU with mitigation	Continued emissions from existing land uses No CEQA Impact	SU with SCAs and mitigation	More emissions and SU with mitigation	Fewer emissions and SU with mitigation
Impact AIR-2.CU: Cumulative Impacts/ Health Risk	SU with mitigation	Continued emissions from existing land use No CEQA Impact	LTS and SU ³	More emissions and SU with mitigation	Fewer emissions and SU with mitigation
4.3 Biological Resources					
Impact BIO-1: Special-Status, Resident and Migratory Birds (Criterion 1)	LTS with mitigation	No Impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-2: Special-Status and Otherwise Protected Bats (Criterion 1)	LTS with mitigation	No Impact	LTS with SCAs as amended	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-3: Special-Status Marine Species (Criterion 1)	LTS with mitigation	No Impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-4: Sensitive Natural Communities (Criterion 2)	LTS	No Impact	LTS with SCAs and mitigation	Similar to the Project and LTS	Similar to the Project and LTS
Impact BIO-5: Wetlands and Waters (Criterion 3)	LTS with mitigation	No Impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact BIO-6: Wildlife Movement (Criterion 4)	LTS	No Impact	LTS with SCAs and mitigation	Similar to the Project and LTS	Similar to the Project and LTS
Impact BIO-7: Tree Protection Ordinance Conflicts (Criterion 6)	LTS	No Impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact BIO-1.CU: Cumulative Impacts	LTS with Mitigation	No Impact	LTS with SCAs and mitigation	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
4.4 Cultural and Tribal Cultural Resources					
Impact CUL-1: Historical Resources/Maritime Resources (Criterion 1)	LTS with Mitigation	No Impact	No Impact	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-2: Historical Resources/Southern Pacific Railroad Industrial Landscape API (Criterion 1)	LTS	No Impact	No Impact	SU due to construction in the API, some mitigation available	Similar to the Project and LTS
Impact CUL-3: Historical Resources/Vibration (Criterion 1)	LTS with Mitigation	No Impact	No Impact	More vibration and LTS with mitigation	Less vibration and LTS with mitigation
Impact CUL-4: Historical Resources/Crane X-422 (Criterion 1)	SU with Mitigation	No Impact	No Impact	Similar to the Project and SU with Mitigation	Similar to the Project and SU with Mitigation
Impact CUL-5: Archaeological Resources (Criterion 2)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-6: Human Remains (Criterion 3)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-7: Tribal Cultural Resources (Criterion 4)	LTS with Mitigation	No Impact	Unknown	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact CUL-1.CU: Cumulative Impact/Historical Resources	SU with Mitigation	No Impact	Project-specific and cumulative SU associated with possible demolition of the Coliseum and Arena; SCAs and mitigation would apply	Similar to the Project and SU with Mitigation	Similar to the Project and SU with Mitigation
Impact CUL-2.CU: Cumulative Impact/ Archaeological Resources/Human Remains/ Tribal Resources	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
4.5 Energy					
Impact ENE-1: Wasteful, Inefficient, and/or Unnecessary Use of Energy (Criterion 1)	LTS with Mitigation	No Impact	LTS	More energy for construction and LTS with Mitigation	Less energy use and LTS with Mitigation
Impact ENE-2: Conflict with Adopted Plans or Standards (Criterion 2)	LTS with Mitigation	No Impact		Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact ENE-1.CU: Cumulative Energy Impacts	LTS with Mitigation	No Impact	No Impact	More energy for construction and LTS with Mitigation	Less energy use and LTS with Mitigation

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
4.6 Geology, Soils, and Paleontological Resources					
Impact GEO-1: Seismic Hazards (Criteria 1.b and 1.c)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GEO-2: Erosion or Soil Loss (Criterion 2)	LTS	No Impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact GEO-3: Expansive or Corrosive Soil (Criterion 3)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GEO-4: Well, Pit, Swamp, Mound, Tank Vault, or Unmarked Sewer Line (Criterion 4)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact GEO-5: Landfills or Unknown Fill Soils (Criterion 5)	LTS	No Impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact GEO-6: Paleontological Resource or Unique Geologic Feature. (Criterion 7)	LTS with Mitigation	No Impact	LTS with SCAs (Impact Cultural-2)	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GEO-1.CU: Cumulative Impact/Geology, Soil, Seismicity, Paleontology	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
4.7 Greenhouse Gas Emissions					
Impact GHG-1: Net Additional GHG Emissions (Criterion 1)	LTS with Mitigation	Continued emissions from existing land uses No CEQA Impact	See quantification of GHG in Table 6-5 ⁴	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact GHG-2: Conflict with Applicable Plan, Policy or Regulation (Criterion 2)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.8 Hazards and Hazardous Materials					
Impact HAZ-1: Routine Transport, Use Disposal, or Accidental Release (Criteria 1 and 2)	LTS	No Impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact HAZ-2: Listed Hazardous Materials Site (Criterion 5)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact HAZ-3: Emergency Response or Emergency Evacuation Plan (Criterion 9)	LTS with Mitigation	No impact	LTS	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact HAZ-1.CU: Cumulative Impacts/Hazards and Hazardous Materials	LTS with Mitigation	No Impact	LTS with SCAS	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
4.9 Hydrology and Water Quality					
Impact HYD-1: Surface Water and Groundwater Quality (Criteria 1, 3, 7, 12, and 13)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact HYD-2: Groundwater Supplies and Recharge (Criterion 2)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact HYD-3: Flooding/Cause Flooding or Runoff (Criteria 4 and 6)	LTS	No Impact	LTS with SCAs	Similar to the Project and LTS	Similar to the Project and LTS
Impact HYD-4: Flooding/Structures within a 100-Year Flood Hazard Area (Criterion 8 and 9)	LTS with Mitigation	No Impact	LTS with SCAs & recommendation to address 16" of sea level rise	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact HYD-5: Flooding/Exposure (Criteria 10 and 11)	LTS	LTS	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact HYD-1.CU: Cumulative Impacts/ Surface Water or Groundwater Quality	LTS with Mitigation	No Impact	No Impact	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.10 Land Use, Plans, and Policies					
Impact LUP-1: Physical Division of an Existing Community (Criterion 1)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-2: Land Use Compatibility/Fundamental Conflict (Criterion 2)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact LUP-3: Consistency with Land Use Plans and Policies/Public Trust Restrictions (Criterion 3)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-4: Consistency with Land Use Plans and Policies /San Francisco Bay Plan and Seaport Plan (Criterion 3)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-5: Consistency with Land Use Plans and Policies/Plan Bay Area (Criterion 3) (Less than Significant)	LTS	No Impact	No Impact identified; Coliseum District is within the Coliseum BART PDA	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-6: Consistency with Land Use Plans and Policies/City of Oakland General Plan (Criterion 3)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
4.10 Land Use, Plans, and Policies (cont.)					
Impact LUP-7: Consistency with Land Use Plans and Policies/City of Oakland Estuary Policy Plan (Criterion 3)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-8: Consistency with Land Use Plans and Policies/City of Oakland Planning Code and Zoning Map. (Criterion 3)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact LUP-1.CU: Cumulative Impacts/Land Use and Planning	LTS with Mitigation	No Impact	LTS	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
4.11 Noise and Vibration					
Impact NOI-1: Construction Noise (Criteria 1 and 2)	SU with Mitigation	No Impact	LTS with SCAs	More construction and SU with Mitigation	Less construction and SU with Mitigation
Impact NOI-2: Construction Vibration (Criterion 8)	SU with Mitigation	No Impact	LTS with SCAs	More construction and SU with Mitigation	Less construction and SU with Mitigation
Impact NOI-3: Operational Impacts/Noise (Criteria 3 and 4)	SU with Mitigation	Existing noise levels would continue No CEQA Impact	SU with SCAs	Similar to the Project and SU with Mitigation	Similar to the Project and SU with Mitigation
Impact NOI-4: Land Use Compatibility Guidelines (Criteria 5 and 6)	LTS with Mitigation	No Impact	LTS with SCA	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact NOI-5: Operational Impacts/Vibration (Criteria 5 and 6)	LTS	No Impact	LTS with SCAs	Similar to the Project and LTS with mitigation	Similar to the Project and LTS with mitigation
Impact NOI-1.CU: Cumulative Impact/Construction Noise	SU	No Impact	No Impact Identified	More construction and SU with Mitigation	Less construction and SU with Mitigation
Impact NOI-2.CU: Cumulative Impact/Operational Noise	SU	Existing noise levels would continue No CEQA Impact	LTS	Similar to the Project and SU with Mitigation	Less traffic noise and SU with Mitigation
4.12 Population and Housing					
Impact POP-1: Construction Impacts (Criterion 1)	LTS	No Impact	No Impact identified	More construction and LTS	Less construction and LTS
Impact POP-2: Operational Impacts/Household and Residential Growth (Criterion 1)	LTS	No Impact	No Impact identified	Similar to the Project and LTS	Less residential growth and LTS
4.12 Population and Housing (cont.)					
Impact POP-3: Operational	LTS	No Impact	No Impact identified	Similar to the Project and	Less employment growth

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
Impacts/Employment Growth (Criterion 1)				LTS	and LTS
Impact POP-4: Displacement (Criteria 2 and 3)	LTS	No Impact	No Impact (housing and residents) and LTS (businesses)	Similar to the Project and LTS	Similar to the Project and LTS
Impact POP-1.CU: Cumulative Impacts/Unplanned Population Growth	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact POP-2.CU: Cumulative Impacts/Displacement	LTS	No Impact	No Impact identified	Similar to the Project and LTS	Similar to the Project and LTS
4.13 Public Services					
Impact PUB-1: Fire Protection and Emergency Medical Response (Criterion 1)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact PUB-2: Police Protection (Criterion 1)	LTS with Mitigation	No Impact		Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact PUB-3: Public Schools (Criterion 1)	LTS	No Impact		Similar to the Project and LTS	Similar to the Project and LTS
Impact PUB-4: Libraries (Criterion 1)	LTS	No Impact		Similar to the Project and LTS	Similar to the Project and LTS
Impact PUB-5: Maritime Emergency Services and Law Enforcement (Criterion 1)	LTS with Mitigation	No Impact		Similar to the Project and LTS	Similar to the Project and LTS
Impact PUB-1.CU: Cumulative Impacts/ Demand for Public Services Resulting in New or Altered Facilities	LTS with Mitigation	No Impact	LTS	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
4.14 Recreation					
Impact REC-1: Accelerated Substantial Physical Deterioration of Recreation Facilities (Criterion 1)	LTS	No Impact	LTS	Similar to the Project and LTS	Less demand and LTS
Impact REC-2: Construction/Expansion of Recreational Facilities (Criterion 2)	LTS with Mitigation	No Impact	LTS	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact REC-1.CU: Cumulative Impact/ Recreation	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
4.15 Transportation and Circulation					
Impact TRANS-1A: Vehicle Miles Traveled/Non-Ballpark Development (Criterion 1)	LTS with Mitigation	No Impact	No Impact identified	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
Impact TRANS-1B: Vehicle Miles Traveled/Ballpark	LTS with Mitigation	No Impact	No Impact Identified	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact TRANS-2: Consistency with Adopted Policies, Plans or Programs/Planned Transportation Projects (Criterion 2)	LTS	No Impact	LTS	Similar to the Project and LTS	Similar to the Project and LTS
Impact TRANS-3: Consistency with Adopted Policies, Plans or Programs/Multimodal Transportation Hazard at At-Grade Railroad Crossings (Criterion 2)	SU with Mitigation	No Impact	SU with SCA and mitigation	Impact reduced but still SU with Mitigation	Similar to the Project and SU with Mitigation
Impact TRANS-4: Consistency with Adopted Policies, Plans or Programs/Construction Transportation Hazard (Criteria 2)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact TRANS-5: Roadway Capacity Increases (Criterion 3)	LTS	No Impact	No Impact identified	Similar to the Project and LTS	Similar to the Project and LTS
Impact TRANS-6: CMP Roadway Segments (Criterion 4)	SU (two locations)	No Impact	SU (nine locations)	Similar to the Project and SU (two locations)	Similar to the Project and SU (two locations)
Impact TRANS-1.CU: Cumulative Impact/VMT	LTS with Mitigation	No Impact	No Impact identified	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact TRANS-2.CU: Cumulative Impact/ Multimodal Transportation Hazard at At-Grade Railroad Crossings	SU with mitigation	No Impact	SU with SCA and mitigation	Impact reduced but still SU with Mitigation	Similar to the Project and SU with Mitigation
Impact TRANS-3.CU: Cumulative Impact/Construction Transportation Hazard	LTS with Mitigation	No Impact	LTS with SCAz	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
Impact TRANS-4.CU: Cumulative Impact/ CMP Roadway Segments	SU (eight locations)	No Impact	SU (13 locations with CASP buildout)	Similar to the Project and SU (eight locations)	Similar to the Project and SU (eight locations)
4.16 Utilities and Service Systems					
Impact UTIL-1: Wastewater Conveyance and Treatment (Criteria 1 and 4)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Less demand and LTS with Mitigation
Impact UTIL-2: Stormwater Conveyance (Criteria 5)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation
4.16 Utilities and Service Systems (cont.)					
Impact UTIL-3: Water Supply (Criteria 3)	LTS	No Impact	LTS with SCAs	Similar to the Project and LTS	Less demand and LTS
Impact UTIL-4: Solid Waste Capacity (Criteria 5 and 6)	LTS with Mitigation	No Impact	LTS with SCAs	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation

TABLE 6-4 (CONTINUED)
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

	Proposed Project¹	Alternative 1: No Project	Alternative 2: Off Site (Coliseum Area) Alternative²	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
Impact UTIL-1.CU: Cumulative Impact/Water Supplies, Wastewater Capacity and Stormwater Conveyance, Solid Waste	LTS with Mitigation	No Impact	LTS	Similar to the Project and LTS with Mitigation	Similar to the Project and LTS with Mitigation

NOTES:

- Impacts of the Project with the Maritime Reservation Scenario would be similar and result in the same CEQA conclusion noted in this column except where additional rows have been included to present different impacts. Impacts of the Project Variants are not included here (see Chapter 5).
- Impacts of Alternative 2 in this column would result from development at the Coliseum site. Impacts of Alternative 2 at the Project site would be the same as with the No Project Alternative.
- The CASP EIR found a significant and unavoidable cumulative impact associated with operational TAC emissions due to the potential for new light industrial, custom manufacturing, and other similar uses in the Specific Plan area, which would be outside of the Coliseum District and therefore LTS in Alternative 2. The CASP EIR also found a significant and unavoidable cumulative impact associated with exposure to TACS due to the lack of certainty that project-specific health risk assessments would be effective.
- GHG emissions associated with development in the Coliseum District portion of the CASP were found to be LTS with implementation of SCAs including the requirement for an emissions reduction plan, although resulting emissions did not meet the project-specific "No Net Additional" threshold used in this EIR. If this threshold were applied, the mitigation measure provided in Section 4.7 would reduce the impact to less than significant.

Legend:

CMP	Congestion Management Plan (for Alameda County)
LTS	Less than significant or negligible impact; no mitigation required
PDA	Planned Development Area (designated by <i>Plan Bay Area</i>).
SCAa	City of Oakland Standard Conditions of Approval as identified in the Coliseum Area Specific Plan (CASP) EIR.
SU	Significant and Unavoidable adverse impact
TAC	Toxic Air Contaminants
TDM	Transportation Demand Management Plan (for non-ballpark uses)
TMP	Transportation Management Plan (for ballpark traffic)

SOURCE: Environmental Science Associates, October 2019

TABLE 6-5
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS

Impact / Pollutant / Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Offsite Alternative (b)	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
Impact AIR-1: Construction Criteria Pollutants(a)					
ROG	<ul style="list-style-type: none"> 56 lbs/day in 2022 and 60-108 lbs/day in 2025-2027 (unmitigated) Up to 45 lbs/day (mitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> 56 lbs/day in 2022 and 60-108 lbs/day in 2025-2027 (unmitigated) Up to 45 lbs/day (mitigated) 	<ul style="list-style-type: none"> 54-60 lbs/day in 2022-2023 and 60-108 lbs/day in 2025-2027 (unmitigated) Up to 45 lbs/day (mitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than project
NO _x	<ul style="list-style-type: none"> 72-166 lbs/day in 2021-2027 (unmitigated) 81 lbs/day in 2021 (mitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> 72-166 lbs/day in 2021-2027 (unmitigated) 81 lbs/day in 2021 (mitigated) 	<ul style="list-style-type: none"> 75-194 lbs/day in 2021-2027 (unmitigated) 86 lbs/day in 2021 (mitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than project

TABLE 6-5
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS

Impact / Pollutant / Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Offsite Alternative (b)	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
PM ₁₀	<ul style="list-style-type: none"> Up to 5.9 lbs/day (unmitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> Up to 5.9 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Up to 7.2 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than project
PM _{2.5}	<ul style="list-style-type: none"> Up to 5.4 lbs/day (unmitigated) 	<ul style="list-style-type: none"> No construction emissions 	<ul style="list-style-type: none"> Up to 5.4 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Up to 6.6 lbs/day (unmitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than project
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Significant and Unavoidable with SCAs and Mitigation	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation
Impact AIR-2: Operational and Overlapping Construction and Operational Criteria Pollutants (a)					
ROG	<ul style="list-style-type: none"> 56-195 lbs/day and 16-31 tons/year in 2023-2028 (unmitigated) 71-163 lbs/day and 12-30 tons/year in 2025-2028 (mitigated) 	<ul style="list-style-type: none"> 1.3 lbs/day and 0.2 tons/year from existing uses on site 	<ul style="list-style-type: none"> 56-195 lbs/day and 16-31 tons/year in 2023-2028 (unmitigated) 71-163 lbs/day and 12-30 tons/year in 2025-2028 (mitigated) 	<ul style="list-style-type: none"> 58-195 lbs/day and 10-31 tons/year in 2023-2028 (unmitigated) 71-163 lbs/day and 12-30 tons/year in 2025-2028 (mitigated) 	<ul style="list-style-type: none"> 52 lbs/day (mitigated)
NO _x	<ul style="list-style-type: none"> 80-198 lbs/day and 11-36 tons/year in 2023-2028 (unmitigated) 84-180 lbs/day and 14-33 tons/year in 2024-2028 (mitigated) 	<ul style="list-style-type: none"> 20.7 lbs/day and 3.8 tons/year from existing uses on site 	<ul style="list-style-type: none"> 80-198 lbs/day and 11-36 tons/year in 2023-2028 (unmitigated) 84-180 lbs/day and 14-33 tons/year in 2024-2028 (mitigated) 	<ul style="list-style-type: none"> 116-198 lbs/day and 15-36 tons/year in 2023-2028 (unmitigated) 84-180 lbs/day and 14-33 tons/year in 2024-2028 (mitigated) 	<ul style="list-style-type: none"> 53.7 lbs/day (mitigated)
PM ₁₀	<ul style="list-style-type: none"> 126 lbs/day and 23 tons/year in 2028 (unmitigated and mitigated) 	<ul style="list-style-type: none"> <1 lb/day and <1 tons/year from existing uses on site 	<ul style="list-style-type: none"> 126 lbs/day and 23 tons/year in 2028 (unmitigated and mitigated) 	<ul style="list-style-type: none"> Up to 126 lbs/day and 23 tons/year in 2028 (unmitigated and mitigated) 	<ul style="list-style-type: none"> 41 lbs/day (mitigated)
PM _{2.5}	<ul style="list-style-type: none"> Up to 32 lbs/day and 6 tons/year (unmitigated) 	<ul style="list-style-type: none"> <1 lb/day and <1 tons/year from existing uses on site 	<ul style="list-style-type: none"> Up to 32 lbs/day and 6 tons/year (unmitigated) 	<ul style="list-style-type: none"> Up to 32 lbs/day and 6 tons/year (unmitigated) 	<ul style="list-style-type: none"> 11 lbs/day (mitigated)
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Significant and Unavoidable with SCAs and Mitigation	Significant and Unavoidable with Mitigation	Less than Significant with Mitigation

TABLE 6-5 (CONTINUED)
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS

Impact / Pollutant / Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Offsite Alternative (b)	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
Impact AIR-4: Offsite Health Risks (a) (c)					
Cancer Risk	<ul style="list-style-type: none"> 64.8 per million (unmitigated) 6.1 per million (mitigated) 	<ul style="list-style-type: none"> 3.7 per million based on existing uses 	<ul style="list-style-type: none"> <11.8 per million for construction only (unmitigated) <3.9 per million for operations only (unmitigated) Mitigated cancer risk not quantified 	<ul style="list-style-type: none"> 212 per million (unmitigated) 36 per million (mitigated) for Brush Street Alignment 25 per million (mitigated) for Market Street Alignment 	<ul style="list-style-type: none"> Not quantified – less than project
Non-Cancer Chronic Risk	<ul style="list-style-type: none"> 0.03 in 2021 (unmitigated) 	<ul style="list-style-type: none"> <1 (unmitigated) 	<ul style="list-style-type: none"> <0.008 for construction only (unmitigated) <-0.016 for operations only (unmitigated) 	<ul style="list-style-type: none"> 0.1 in 2022 (unmitigated) 	<ul style="list-style-type: none"> Not quantified – less than project
Annual Average PM _{2.5} Concentrations	<ul style="list-style-type: none"> 0.19 µg/m³ in 2022 (unmitigated) 	<ul style="list-style-type: none"> < 0.3 µg/m³ (unmitigated) 	<ul style="list-style-type: none"> <0.094 µg/m³ for construction only (unmitigated) <0.2 µg/m³ for operations only (unmitigated) 	<ul style="list-style-type: none"> 0.67 µg/m³ in 2022 (unmitigated) 0.19 in 2027 (mitigated) 	<ul style="list-style-type: none"> Not quantified – less than project
IMPACT	Less than Significant with Mitigation	No Impact	Less than Significant with Mitigation	Significant and Unavoidable with Mitigation (Brush Street Alignment)	Less than Significant with Mitigation
Impact AIR-5: Onsite Health Risks (a)					
Cancer Risk	<ul style="list-style-type: none"> 201 per million (unmitigated) 2.1 per million (mitigated) 	<ul style="list-style-type: none"> No on site receptors 	<ul style="list-style-type: none"> Risk not quantified 	<ul style="list-style-type: none"> 592 per million (unmitigated) 2.2 per million (mitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than project
Non-Cancer Chronic Risk	<ul style="list-style-type: none"> 0.18 in 2027 (unmitigated) 	<ul style="list-style-type: none"> No new onsite receptors 	<ul style="list-style-type: none"> Risk not quantified 	<ul style="list-style-type: none"> 0.18 in 2027 (unmitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than project
Annual Average PM _{2.5} Concentrations	<ul style="list-style-type: none"> 0.89 µg/m³ in 2027 (unmitigated) 0.02 µg/m³ in 2027 (mitigated) 	<ul style="list-style-type: none"> No new onsite receptors 	<ul style="list-style-type: none"> Risk not quantified 	<ul style="list-style-type: none"> 0.9 µg/m³ in 2027 (unmitigated) 0.02 µg/m³ in 2027 (mitigated) 	<ul style="list-style-type: none"> Not quantified – likely less than project
IMPACT	Less than Significant with Mitigation	No Impact	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation

TABLE 6-5 (CONTINUED)
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS

Impact / Pollutant / Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Offsite Alternative (b)	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
Impact AIR-1.CU: Cumulative Regional Criteria Pollutants (a) (c)					
	<ul style="list-style-type: none"> • ROG: 71-163 lbs/day and 12-30 tons/year in 2025-2028 (mitigated) • NO_x: 84-180 lbs/day and 14-33 tons/year in 2024-2028 (mitigated) • PM₁₀: 125 lbs/day and 23 tons/year in 2028 (mitigated) 	<ul style="list-style-type: none"> • All emissions from existing sources are below the thresholds 	<ul style="list-style-type: none"> • ROG: 71-163 lbs/day and 12-30 tons/year in 2025-2028 (mitigated) • NO_x: 84-180 lbs/day and 14-33 tons/year in 2024-2028 (mitigated) • PM₁₀: 125 lbs/day and 23 tons/year in 2028 (mitigated) 	<ul style="list-style-type: none"> • ROG: 71-163 lbs/day and 12-30 tons/year in 2025-2028 (mitigated) • NO_x: 84-180 lbs/day and 14-33 tons/year in 2023-2028 (mitigated) • PM₁₀: Up to 125 lbs/day and 23 tons/year in 2028 (mitigated) 	<ul style="list-style-type: none"> • Construction emissions not quantified – likely less than Project but remain significant • Operational mitigated emissions do not exceed thresholds in any year
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation (for Construction Only)
Impact AIR-2.CU: Cumulative Regional Health Risks (a)					
Offsite Sensitive Receptors					
Cancer Risk	• 332 per million (mitigated)	• Risk based on emissions from existing sources below the threshold	• Not quantified	• 294 per million (mitigated)	• Not quantified – likely less than project
Non-Cancer Chronic Risk	• 0.006 in 2027 (mitigated)	• Risk based on emissions from existing sources below the threshold	• Not quantified	• 0.04 in 2022 (mitigated)	• Not quantified – less than project
Annual Average PM _{2.5} Concentrations	• 3.14 µg/m ³ in 2027 (mitigated)	• Risk based on emissions from existing sources below the threshold	• Not quantified	• 3.14 µg/m ³ in 2022 (mitigated)	• Not quantified – likely less than project
Onsite Sensitive Receptors					
Cancer Risk	• 324 per million (mitigated)	• No onsite receptors	• Risk not quantified	• 299 per million (mitigated)	• Not quantified – likely less than project
Non-Cancer Chronic Risk	• 0.008 in 2026 (mitigated)	• No on site receptors	• Risk not quantified	• 0.02 in 2027 (mitigated)	• Not quantified – likely less than project
Annual Average PM _{2.5} Concentrations	• 2.4 µg/m ³ in 2027 (mitigated)	• No on site receptors	• Risk not quantified	• 2.0 µg/m ³ in 2026 (mitigated)	• Not quantified – likely less than project
IMPACT	Significant and Unavoidable with Mitigation	No Impact	Exposure of New Receptors is Less than Significant with SCAs; Operational TAC Emissions are Significant and Unavoidable	Significant and Unavoidable with Mitigation	Significant and Unavoidable with Mitigation

TABLE 6-5 (CONTINUED)
COMPARISON OF KEY AIR QUALITY AND GREENHOUSE GAS IMPACTS

Impact / Pollutant / Category	Proposed Project (a)	Alternative 1: No Project Alternative	Alternative 2: Offsite Alternative (b)	Alternative 3: Grade Separation Alternative	Alternative 4: Reduced Project Alternative
Impact GHG-1: Project GHG Emissions (a)					
GHG Emissions	<ul style="list-style-type: none"> 53,026 MTCO₂e net additional annually in 2027 (unmitigated) No net additional (mitigated) 	<ul style="list-style-type: none"> 745 MTCO₂e annually from existing uses on site 	<ul style="list-style-type: none"> 52,956 MTCO₂e net additional annually in 2027 (unmitigated) 	<ul style="list-style-type: none"> 53,124 MTCO₂e net additional annually (unmitigated) No net additional (mitigated) 	<ul style="list-style-type: none"> 17,913 MTCO₂e net additional annually in 2027 (unmitigated) No net additional (mitigated)
IMPACT	Less than Significant with Mitigation	No Impact	Less than Significant with SCAs (using Coliseum District EIR significance criterion)	Less than Significant with Mitigation	Less than Significant with Mitigation

NOTES:

^a For more information see Section 4.2, *Air Quality*, Section 4.7, *Greenhouse Gas Emissions*, and related appendices.

^b Off-site alternative impacts would be similar to Project impacts except off-site health risks are derived from the City of Oakland Coliseum District Specific Plan (CASP) EIR certified in 2015. Health risks would be lower than reported in the CASP EIR because the Off-site alternative would have less parking, dwelling units, and hotel rooms than the alternative analyzed in the CASP EIR.

^c For information on the location of the Maximally Exposed Individual Receptor (MEIR) for the Project for each health risk value presented in this table, see Section 4.2, *Air Quality*. For information on the location of the MEIR for Alternative 3 for each health risk value presented in this table, see Appendix AIR, *Air Quality Supporting Information*.

SOURCE: Appendix AIR, *Air Quality Supporting Information* and Environmental Science Associates, 2019

The BAAQMD requested that the EIR include analysis of an alternative project site outside of an AB 617 community. AB 617 refers to legislation adopted by the state legislature and signed by the Governor in 2017. To implement the law, the California Air Resources Board (CARB) has established the State's Community Air Protection Program (CAPP) aimed at reducing exposure to air toxics in communities most impacted by air pollution. In fall of 2018, ten communities throughout the state were selected by CARB as designated CAPP communities for either additional air monitoring, immediate emissions reductions or in some cases both criteria. West Oakland was selected as a community for immediate emissions reductions in the first year of the program and has recently released a draft emissions reductions action plan that outlines the pollution reduction measures the community will implement to achieve the goals of the CAPP. (For more information, about the state program see the California Air Resources Board website at: <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/about>, for details related to West Oakland's program refer to: <http://www.baaqmd.gov/community-health/community-health-protection-program/west-oakland-community-action-plan>).

The City considered possible off-site alternatives for analysis in this EIR, and an off-site alternative in the Oakland Coliseum Area is included for in-depth analysis earlier in this chapter. East Oakland, which contains the Coliseum Area, is not currently designated as an AB 617 community, but it has been identified as a future "candidate" for designation due to its high cumulative exposure burden (BAAQMD, 2018).

The City has not identified any other sites that are large enough to accommodate the Project, for which the City or the Project sponsor has sufficient site control or the ability to obtain such control, and where the main Project objectives could feasibly be met, and that would reduce or eliminate environmental impacts of the Project. For these reasons, an additional off-site alternative has not been included for in-depth analysis in this EIR.

6.4.2 Alternative without At-Grade Railroad Crossings

The UPRR requested that all access to the project be grade-separated and span the rail right of way. The UPRR also stated "current crossings will also not be reliable points of access during construction because they may often be occupied by trains, thereby preventing movement of construction vehicles, equipment, and personnel. Construction plans must take this into account."

The proposed Project would include a number of rail safety improvements in the vicinity of the site that are intended to address the safety of pedestrians, bicyclists, and motorists, as described in Section 4.15. However, even with these improvements, this Draft EIR concludes that the Project would have a significant and unavoidable impact related to rail safety and the City has therefore elected to analyze a possible alternative that would include a grade-separated crossing for vehicles, as well as for pedestrians, and bicyclists. (See the analysis of Alternative 3: The Proposed Project with Grade Separation Alternative earlier in this chapter.) In Alternative 3, the existing at-grade crossing at Market Street would either be replaced with a new grade-separated (either over- or under-crossing) or a new over- or under-crossing would be constructed at Brush Street, allowing for possible retention of the Market Street at-grade crossing, either with or without restrictions. Other existing at-grade crossings serving the site (at MLK Jr. Way) and in the site vicinity would remain in place.

A number of other possible alignments for grade-separated crossings were studied, including MLK, Chestnut Street, Linden Street, Myrtle Street, Jefferson Street, Clay Street, and Castro Street. These other alignments were rejected in favor of those included in Alternative 3 (Market and Brush Streets) for a number of reasons. Some of the other alignments would significantly limit the developability of the site for ballpark and non-ballpark uses, others would conflict with the existing Peaker Power Plant, and others would result in poor connections to the City's existing street grid.

This Draft EIR does not analyze an alternative which eliminates both existing at-grade crossings serving the site at MLK and at Market Street, or an alternative which would provide a grade-separated crossing to the site for construction. The elimination of both existing at-grade crossings serving the site was deemed infeasible, given the need to accommodate access to the site and the constraints associated with constructing grade separations at both Market (or Brush) Street *and* MLK. Specifically:

- Adding a grade separation at MLK in addition to Market (or Brush) Street would impact access to additional parcels north of the railroad tracks, affecting eight additional driveways, and would eliminate access to MLK from 2nd Street.
- Adding a grade separation at MLK in addition to Market (or Brush) Street would impact proposed utility service to the site because both Market and MLK will be utility corridors, providing sanitary sewer, domestic water, and other utility service to the site, and grade separations would limit the capacity of the right-of-way to accommodate utilities. These streets also accommodate significant City storm drain infrastructure.
- MLK is planned as one of the primary entrances to the site and construction of a grade separated crossing could eliminate pedestrian/bicycle access at that location and affect the proposed Bay Trail extension.
- Adding a grade separation at MLK in addition to Market (or Brush) Street would require changing the grades of onsite streets and the ramps required to get both grade separations back to grade would limit the developable acreage the Project site, reducing the economic viability of the Project.

Even if it was possible to provide two grade separated crossings to serve the site (one at Market Street and one at MLK), many pedestrians would continue to use the Water Street pedestrian access to the Project site, resulting in increased pedestrian and bicycle traffic at existing off-site at-grade crossings at Washington and Clay Streets as well as Broadway. Thus, any alternative with grade-separated crossings serving the site, even if feasible, would substantially reduce, but would not eliminate the associated significant and unavoidable impact of the Project.

Provision of a grade separated crossing prior to commencement of Project construction was deemed infeasible given the length of time it would take to design, get approval for, and construct a new grade separated crossing and the stated Project objective to complete construction of the new ballpark, together with any infrastructure required within a desirable timeframe and to maintain the Oakland Athletics' competitive position within Major League Baseball.

6.5 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires EIRs to identify an environmentally superior alternative, and if the No Project Alternative is superior, to identify the second most environmentally superior alternative. Based on the analysis provided above, Alternative 1: The No Project Alternative would be environmentally superior because it would avoid all of the impacts of the proposed Project. The Reduced Project Alternative would be the second most environmentally superior alternative because it would avoid most of the significant and unavoidable air quality impacts of the proposed Project and all other build alternatives.

6.6 References

Bay Area Air Quality Management District, *Initial Submittal: Technical Assessment to Develop an Initial List of Candidate Communities for the Community Air Protection Program*, Letter from Jack P. Broadbent, Air Pollution Control Officer, to Richard Corey, Executive Officer of the California Air Resources Board, dated April 25, 2018. (Available at https://ww2.arb.ca.gov/sites/default/files/2018-05/BAAQMD_AB617-initialsubmittal.pdf).

BKF and Athletics, *Alternative Data Needs*, January 13, 2020.

BKF and Fehr & Peers *Memorandum: Howard Terminal – Railroad Grade Separation Alternative – Market & Brush Street*, August 9, 2019.

City of Oakland, Coliseum Area Specific Plan, *Draft Environmental Impact Report, Volume I and II*, dated August 2014.

ENGEO, *Memorandum: Market and Brush Street Grade Separations – Potential Environmental and Geotechnical Concerns*, September 24, 2019.